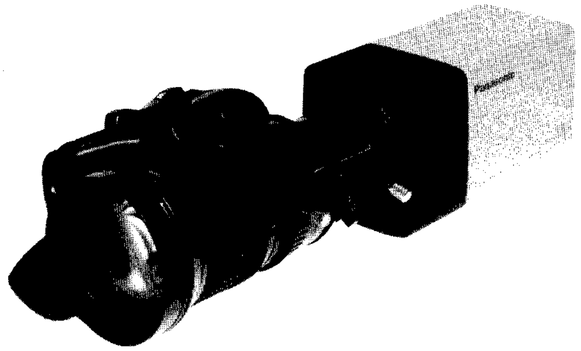
ORDER NO. AVS9404832C8

Service Manual

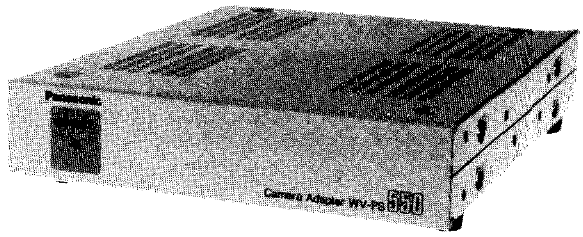
Colour Video Camera
WV-E550E

Camera Adaptor
WV-PS550



(Lens : Purchased locally)

WV-E550E



WV-PS550

WV-E550E

SPECIFICATIONS

Pickup element	1/2" interline, supersensitive CCD
Pixels	752 (H) x 582 (V) pixels
Scanning	2:1 interlace
System	PAL
Scanning fequency	15.625 kHz (horizontal), 50 Hz (vertical)
Lens mout	1/2" standard bayonet mount
Synchronizing	Internal or external
External sync input	VBS, BB, VS or HD/VD
Sensitivity	2000 lux, F8, 3200 °K
Minimum illumination	7 lux, at F1.4, +18 dB
Signal-to-noise ratio	60 dB (typical)
Horizontal resolution	800 TV lines (high band, DTL ON)
Registration	0.05%
Contour correction	Horizontal and vertical (2 Line Type)
White balance	AWC (2 memories), MANU, ATW
Black balance	AUTO, Manual
Colour bar	full colour bar (Setup 0)
Encoder	Y, U, V
Shutter speed	1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000, MANU (1/15000 to 1/62)
Gain	0 dB, 9 dB, 18 dB, AGC
Gamma correction	ON/OFF switchtable
Storage mode	Field/frame switchable
Iris	AUTO, ELC
Video output	Composite: 1 Vp-p (75 Ω) x 1 (BNC connector) (VIDEO/RGB connector)
	R/B/G: 0.7 Vp-p (75 Ω) x 1 (VIDEO/RGB connector)
	Y: 1 Vp-p (75 Ω) x 1 (VIDEO/RGB connector)
	C: 0.3Vp-p chroma level(75 Ω) x 1 (VIDEO/RGB connector)
	PR: 0.7 Vp-p (75 Ω) x 1 (VIDEO/RGB connector)
	PB: 0.7 Vp-p (75 Ω) x 1 (VIDEO/RGB connector)
	Sync: 4 V/0.3 V (75 Ω) switchable x 1 (VIDEO/RGB connector)

Panasonic

Source voltage	12 V DC
Power consumption	12.0 W
Operating temperature	–10°C to +45°C (14°F to +113°F)
Storage temperature	–20°C to +60°C (4°F to +140°F)
Dimensions	81 (W) x 86 (H) x 169 (D) mm [3-3/16" (W) x 3-3/8" (H) x 6-5/8" (D)]
Weight	1.2 kg (2.64 lbs.)

Weight and dimensions indicated are approximate.
Specifications are subject to change without notice.

STANDARD ACCESSORIES

Body cap	1
4 pin connector for EXT DC IN	1

OPTIONAL ACCESSORIES

Multiplex Adaptor WV-PS550
Remote Control Unit (RCU) WV-RC700A
Remote Control Box (RCB) WV-CB700A
RCU Rack Mount Frame WV-Q70
Lens Extension Cable
  WV-CA12T12 (12-pin - 12-pin, approx. 15 cm/6")
Conversion Cable (for WV-CB700A)
  WV-CA20T10 (20-pin - 10-pin, approx. 1m/3.3ft)
Conversion Cable (for WV-RC700A)
  WV-CA26T20 (26-pin - 20-pin, approx. 3m/9.9ft)
Connection Cable (Dsub-Dsub)
  WV-CA9T9 (9-pin - 9-pin, approx. 5m/16.5ft)
Connection Cable (Dsub-BNC)
  WV-CA9T5 (9-pin - BNC, approx. 5m/16.5ft)
Studio Cable (for WV-RC700A)
  WV-CA26U15 (26-pin - 26-pin, approx. 15m/49.5ft)
  WV-CA26U30 (26-pin - 26-pin, approx. 30m/99ft)
  WV-CA26U100 (26-pin - 26-pin, approx. 100m/330ft)
Joint Connector WV-CA26T26 (26-pin - 26-pin)
RCB Cable (for WV-CB700A)
  WV-CA10B25 (10-pin - 10-pin, approx. 25m/82.5ft)
  WV-CA10B50 (10-pin - 10-pin, approx. 50m/165ft)
Mounting Bracket WV-831

WV-PS550

SPECIFICATIONS

Power:	Input voltage 85 - 110V DC (supplied by the RCU WV-RC700A)
Input and Output:	
MPX Input and Output:	Frequency multiplex signal (N type connector x 1)
Data Input:	RS-232C, 2400 bps (4-pin connector x 1) The Camera Adaptor WV-PS550, Camera WV-E550 and Remote Control Unit can not be controlled by RS-232C directly.
Audio Input:	–20 dB audio signal
Pan/Tilt and Housing Control Output:	Right, left, up and down, defroster and wiper Open collector output (low active) Sink current 20 mA max. Withstand voltage 30V max. (28-pin connector x 1 each)
Switch Function:	Audio in/Data in Select Switch
Dimensions:	206.5 (W) x 44 (H) x 250 (D) mm (8-1/8" (W) x 1-11/16" (H) x 9-1/2" (D))
Weight:	2.4 kg (5.28lbs.)

Weight and dimensions indicated are approximate.
Specifications are subject to change without notice.

STANDARD ACCESSORIES

Camera Cable (36-pin/28-pin)	1pc
4-pin Connector for DATA IN	1pc
N type Connector for MPX	1pc

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION:
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICEING TO QUALIFIED SERVICE PERSONNEL.

This symbol warns the user that uninsuland voltage within the unit may have suificient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any inside part of this unit.

This symbol alerts the user that impotant literature concerning the operation and maintenance of this has been included. Therefore, it should be read carefully in order to avoid any problems.

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are indicated by the "⚠" mark on the schematic diagram and the replacement parts list. It is essential that these critical parts should be repleced with manufacture's specilied parts to prevent shock, fire, or other hazards.
Do not modify the original design without permission of manufacture.

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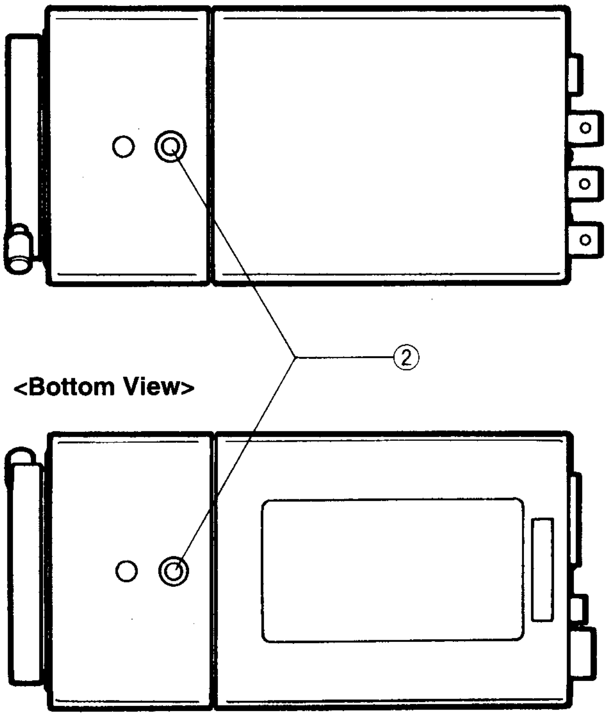
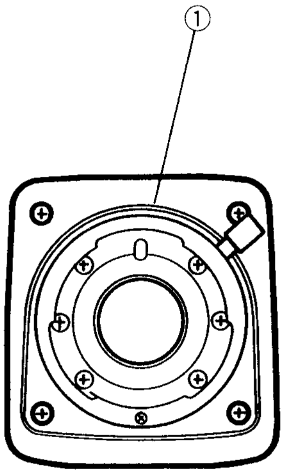
MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS (WV-E550E)

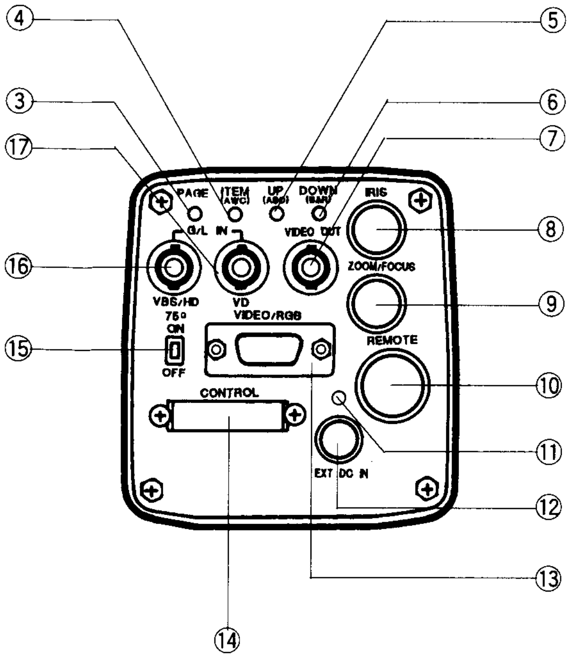
<Top View>



<Bottom View>



<Front View>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PAGE
ITEM (AWC)
UP (ABC)
DOWN (BAR)
IRIS
G/L IN
VIDEO OUT
ZOOM/FOCUS
VBS/HD
VD
75Ω
ON
OFF
VIDEO/RGB
REMOTE
CONTROL
EXT DC IN

1. **Lens Mount**
   1/2" standard bayonet type lens or a microscope adaptor can be mounted.

2. **Mounting Hole**
   A screw hole (1/4" - 20 UNC) for mounting the camera on a wall, ceiling with a mounting bracket or tripod.

3. **Page Switch (PAGE)**
   A menu will appear on the monitor screen when this switch is pressed for around 2 seconds. Pressing the switch advances the menu page.

4. **Item Switch (ITEM/AWC)**
   Any of the items shown in the menu can be selected with this switch. When the menu is not displayed or the camera is in shooting mode, the automatic white balance control can be set with this switch.

5. **Up Switch (UP/ABC)**
   While the menu is displayed, any setting can be brought up to a higher value with this switch. When the menu is not displayed or the camera is in shooting mode, the automatic black balance control canbe set with this switch.

6. **Down Switch (DOWN/BAR)**
   While the menu is displayed any setting can be brought down to a lower value with this switch. When the menu is not displayed or the camera is in shooting mode, the colour bar and the shooting conditions are alternately indicated by pressing the switch.

7. Video Output Connector (VIDEO OUT)

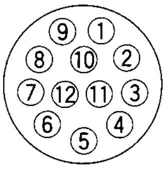
A composite video signal is provided at this connector.

8. Iris Connector (IRIS)

Input terminal for lens with an iris control function. Some lenses may require an optional lens extension cable for connection.

Pin No.	Signal	Pin No.	Signal
1	Not Used	7	Iris F
2	Not Used	8	Auto/Remote Control
3	GND	9	Not Used
4	Auto/Manual Control	10	Not Used
5	Iris Control	11	Not Used
6	Lens P	12	Not Used

Iris Connector (IRIS)



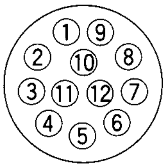
<Front View>

9. Zoom/Focus Connector (ZOOM/FOCUS)

Input terminal for lens with zoom and focus function that can be remote controlled.

Pin No.	Signal	Pin No.	Signal
1	Not Used	7	Voltage Common
2	Not Used	8	Focus Control
3	GND	9	Zoom Control
4	Not Used	10	Not Used
5	Not Used	11	Lens +V
6	+12 V	12	Lens –V

Zoom/Focus Connector (ZOOM/FOCUS)



<Front View>

10. Remote Connector (REMOTE)

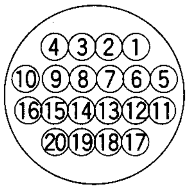
Input terminal dedicated to control signals from the optional Remote Control Box (WV-CB700A) and the Remote Control Unit (WV-RC700A).

* WV-CB700A is connected through the optional conversion cable (WV-CA20T10).

* WV-RC700A is connected through the optional conversion cable (WV-CA26T20).

Pin No.	Signal	Pin No.	Signal
1	Composite Video Output	11	RCB Transmission
2	GND	12	Control (Command)
3	G/Y/Y Output	13	+9.2 V RCB
4	R/PR/C Output	14	DC 12 V Output
5	GND	15	DC 12 V Input
6	RCB Detect	16	DC 12 V Input
7	EXT SUB In	17	RCB Reception
8	B/PB Output	18	GND
9	GND	19	GND
10	G/L Input	20	Not used

Remote Connector (REMOTE)



<Front View>

11. Power Indicator

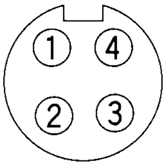
Red LED lamp lights to indicate that the specified DC power is supplied to the camera.

12. DC Input Connector (EXT DC IN)

12 V DC is supplied through the 4-pin connector provided with the camera.

Pin No.	Signal
1	+12 V In
2	+12 V In
3	Ground
4	Ground

DC Input Connector (EXT DC IN)



<Front View>

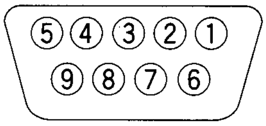
13. Video/RGB Output Connector (VIDEO/RGB)

Composite/Y signal, RGB/Y-C/component signal and synchronizing signal are output from this connector.

The optional cable WV-CA9T5 or WV-CA9T9 must be used for connection to this connector.

Pin No.	Signal	Pin No.	Signal
1	GND	6	SY/COMP
2	GND	7	SYNC
3	R/PR/C	8	GND
4	G/Y/Y	9	C/NC
5	B/PB/NC		

Video/RGB Output Connector (VIDEO/RGB)



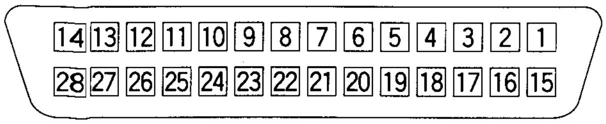
<Front View>

14. Control Connector (CONTROL)

Control signals for a pan/tilt unit come to this connector when a pan/tilt unit controller is connected to the camera through the Remote Control Unit WV-RC700A with a multicable.
The multiplex adaptor WV-PS550 is connected to this connector when using a coaxial multiplex system. The WV-RC700A and WV-PS550 can be connected with a coaxial cable.

Pin No.	Signal	Pin No.	Signal
1	Composite Video Output	15	Defroster Control Output
2	GND	16	Wiper Control Output
3	Not Used	17	Common
4	Not Used	18	+5.2 V Output
5	G/L Input	19	GND
6	GND	20	–5.2 V Output
7	WV-PS550 Detect	21	GND
8	PS Transmission	22	GND
9	PS Reception	23	DC 12 V Input
10	GND	24	DC 12 V Input
11	UP Control Output	25	Not Used
12	Down Control Output	26	+9.2 V Output
13	Left Control Output	27	GND
14	Right Control Output	28	GND

Control Connector (CONTROL)



<Front View>

15. G/L Signal 75-ohm ON/OFF Switch (75Ω ON/OFF)

A terminating switch for G/L signals at G/L VBS/HD input connector and G/L VD input connector.

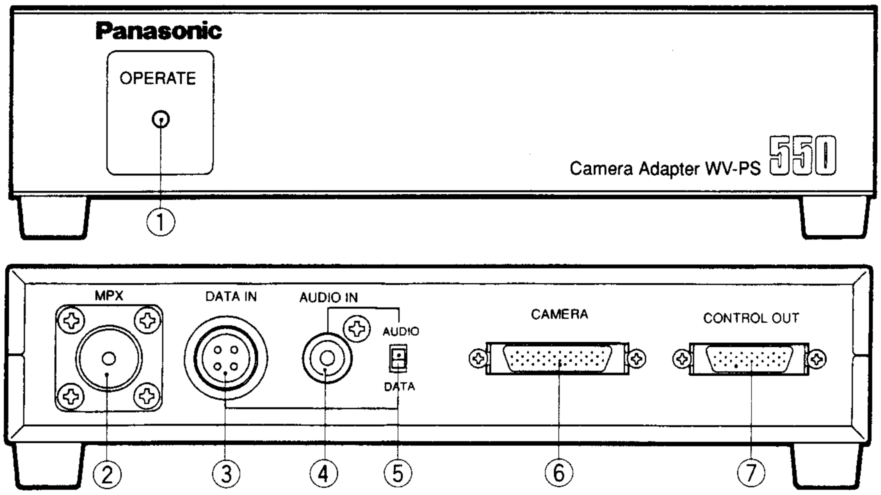
16. G/L VBS/HD Input Connector (G/L IN - VBS/HD)

Signals synchronized with the reference signal are to be supplied to this connector when the camera is to be synchronized with the reference signal. VBS/BB, VS and HD signals are to be automatically determined.

17. G/L VD Input Connector (G/L IN - VD)

Same as Item (16) except that VD signal is to be supplied when input signal at Item (16) is HD.

MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS (WV-PS550)



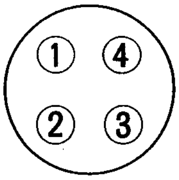
(1) Power LED (OPERATE)
When the Remote Control Unit (RCU) WV-RC700A and Camera WV-E550 are properly connected and also when the power from the Remote Control Unit is supplied, this LED lights.

(2) MPX Input/Output Connector (MPX)
This connector is used to connect the coaxial cable from the MPX connector of the Remote Control Unit (RCU) WV-RC700A.

(3) Data Input Connector (DATA IN, 4-pin)
This connector is used to connect the RS-232C (baud rate 2400 bps) control signal from the pan/tilt and lens controller.

Caution:
When connecting the controller to this connector, do not connect anything to the Audio Input Jack (4). Also, be sure to switch the Audio In/Data In Select Switch (5) is set to the DATA IN position.

Pin No.	Signal
1	NC
2	GND
3	RXD
4	TXD



(4) Audio Input Jack (AUDIO IN)
This jack is used to supply an audio signal for output to the audio output of the Remote Control Unit (RCU) WV-RC700A.

Caution:
When supplying an audio signal to the remote control unit using this jack, nothing should be connected to the Data Input Connector (3) and Audio In/Data In Select Switch (5) should be switched over to the AUDIO position.
Also, be sure to switch the select switch on the MOD PCB board of the Remote Control Unit (RCU) WV-RC700A to the AUDIO position.

(5) Audio In/Data In Select Switch (AUDIO IN/DATA IN)
This switch is used to select the Data Input Connector (3) and the Audio Input Jack (4).
AUDIO IN: Audio signal supplied to WV-RC700A is selected.
DATA IN: Data signal supplied from the controller is selected.

(6) Camera Cable Connector (CAMERA 36-pin)
This connector is used to connect the 36-pin side of the supplied 28-pin/36-pin cable.
(The 28-pin side of the cable should be connected to the Colour Camera WV-E550.)

(7) Control Output Connector (CONTROL OUT, 28-pin)
This connector is used to connect the cable for controlling the pan/tilt unit.

Pin No.	Signal
11	UP
12	DOWN
13	LEFT
14	RIGHT
15	DEF
16	WIPE
17	COM (0V)
19, 27, 28	GND
Others	NC

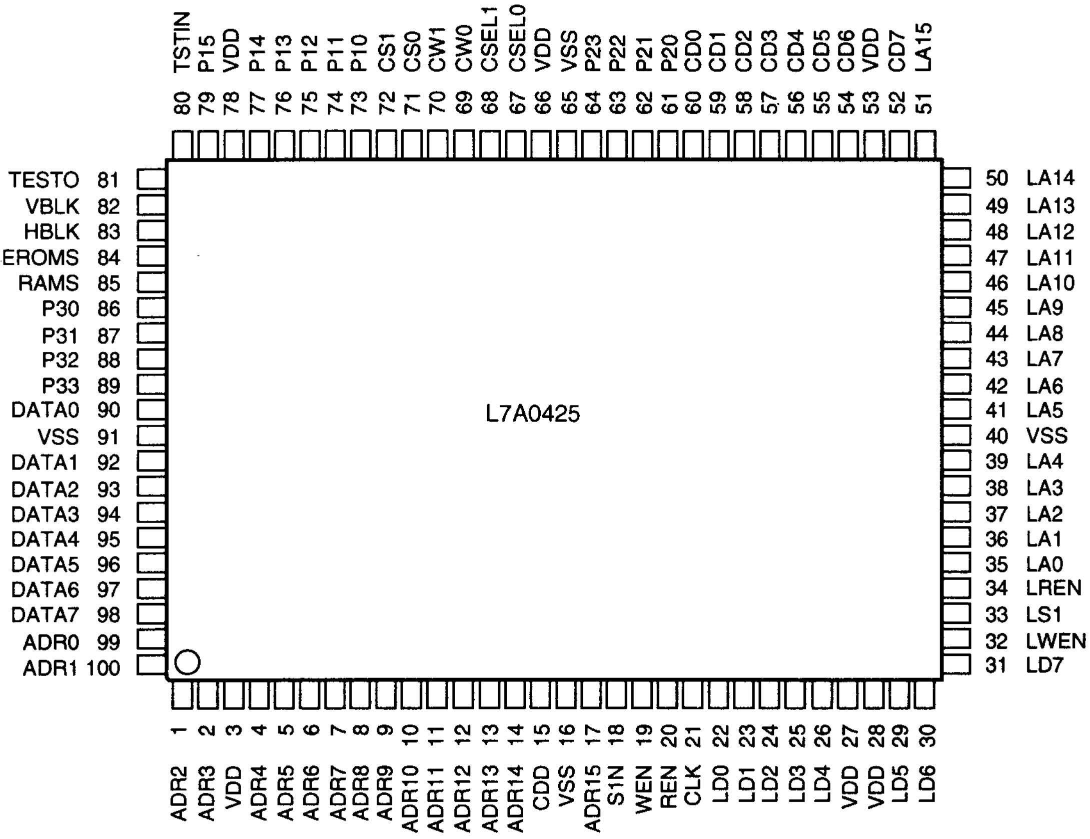
* **Control signal Interface**
Control system: ON/OFF
Polarity: Low active
Output: Open collector
(transistor withstand voltage: 30V max.)
Sink current: 20 mA max.

* **Caution:**
When driving the pan/tilt head, relay, etc. directly, care should be taken to prevent the power from going up beyond the withstand voltage of the adaptor output circuit and the sink current (20 mA max.).

CIRCUIT DESCRIPTION

IC Description (WV-E550E)

1. IC1 on the System Control Board is using the Microprocessor I/O Expander Gate Array Logic IC YWL7A0425.
   Description of this IC is as follows:


L7A0425
80 TSTIN
79 P15
78 VDD
77 P14
76 P13
75 P12
74 P11
73 P10
72 CS1
71 CS0
70 CW1
69 CW0
68 CSEL1
67 CSEL0
66 VDD
65 VSS
64 P23
63 P22
62 P21
61 P20
60 CD0
59 CD1
58 CD2
57 CD3
56 CD4
55 CD5
54 CD6
53 VDD
52 CD7
51 LA15
TESTO 81
VBLK 82
HBLK 83
EROMS 84
RAMS 85
P30 86
P31 87
P32 88
P33 89
DATA0 90
VSS 91
DATA1 92
DATA2 93
DATA3 94
DATA4 95
DATA5 96
DATA6 97
DATA7 98
ADR0 99
ADR1 100
50 LA14
49 LA13
48 LA12
47 LA11
46 LA10
45 LA9
44 LA8
43 LA7
42 LA6
41 LA5
40 VSS
39 LA4
38 LA3
37 LA2
36 LA1
35 LA0
34 LREN
33 LS1
32 LWEN
31 LD7
1 ADR2
2 ADR3
3 VDD
4 ADR4
5 ADR5
6 ADR6
7 ADR7
8 ADR8
9 ADR9
10 ADR10
11 ADR11
12 ADR12
13 ADR13
14 ADR14
15 CDD
16 VSS
17 ADR15
18 S1N
19 WEN
20 REN
21 CLK
22 LD0
23 LD1
24 LD2
25 LD3
26 LD4
27 VDD
28 VDD
29 LD5
30 LD6

(TOP VIEW)

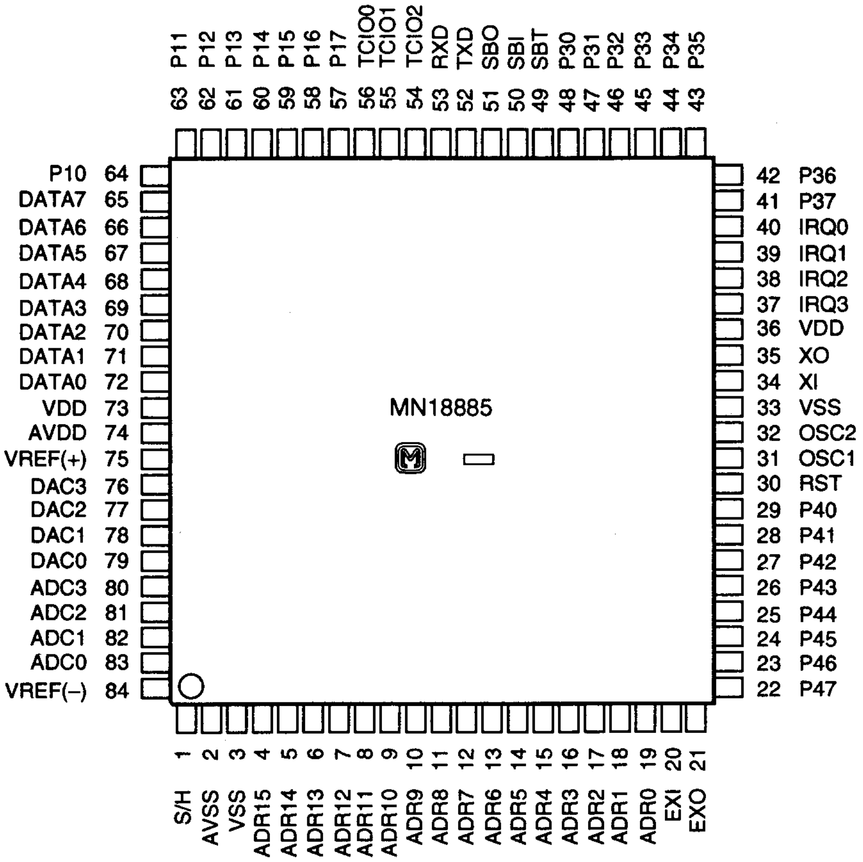
Pin	Name	I/O	Description
1	ADR2	I	Address input terminals from Microprocessor. (16-Bit)
2	ADR3	I	
3	VDD	–	Power supply terminal.
4	ADR4	I	Address input terminals from Microprocessor. (16-Bit)
5	ADR5	I	
6	ADR6	I	
7	ADR7	I	
8	ADR8	I	
9	ADR9	I	
10	ADR10	I	
11	ADR11	I	
12	ADR12	I	
13	ADR13	I	
14	ADR14	I	

Pin	Name	I/O	Description
15	VDD	–	Power supply terminal.
16	VSS	–	Ground terminal.
17	ADR15	I	Address (MSB) input terminal from Microprocessor.
18	S1N	I	S1N signal input terminal.
19	WEN	I	Write enable signal input terminal.
20	REN	I	Read enable signal input terminal.
21	CLK	I	Clock pulse input terminal.
22	LD0	I/O	(LSB) Data input/output terminals between Digital Board.
23	LD1	I/O	
24	LD2	I/O	
25	LD3	I/O	
26	LD4	I/O	
27	VDD	–	Power supply terminal.

Pin	Name	I/O	Description
28	VDD	–	Power supply terminal.
29	LD5	I/O	Data input/output terminals between Digital Board.
30	LD6	I/O	
31	LD7	I/O	(MSB)
32	LWEN	I	Write enable signal input terminal.
33	LS1	I	LS1 signal input terminal.
34	LREN	I	Read enable signal input terminal.
35	LA0	O	(LSB) Address output terminals for Digital Board. (16-Bit)
36	LA1	O	
37	LA2	O	
38	LA3	O	
39	LA4	O	
40	VSS	–	Ground terminal.
41	LA5	O	Address output terminals for Digital Board. (16-Bit)
42	LA6	O	
43	LA7	O	
44	LA8	O	
45	LA9	O	
46	LA10	O	
47	LA11	O	
48	LA12	O	
49	LA13	O	
50	LA14	O	
51	LA15	O	(MSB)
52	CD7	O	DOWN SW signal output terminal.
53	VDD	–	Power supply terminal.
54	CD6	O	UP SW signal output terminal.
55	CD5	O	LEFT SW signal output terminal.
56	CD4	O	RIGHT SW signal output terminal.
57	CD3	O	FAR SW signal output terminal.
58	CD2	O	NEAR SW signal output terminal.
59	CD1	O	WIDE SW signal output terminal.
60	CD0	O	TELE SW signal output terminal.
61	P20	I	P20 signal input terminal.
62	P21	I	Clock Data input terminal.
63	P22	–	Test point terminal.
64	P23	–	Test point terminal.
65	VSS	–	Ground terminal.
66	VDD	–	Power supply terminal.

Pin	Name	I/O	Description
67	CSEL0	O	Chip Select 0 signal output terminal.
68	CSEL1	O	Chip Select 1 signal output terminal.
69	CW0	I	CW0 signal input terminal.
70	CW1	I	CW1 signal input terminal.
71	CS0	I	CS0 signal input terminal.
72	CS1	I	CS1 signal input terminal.
73	P10	O	SC CRS2 signal output terminal.
74	P11	O	SC CRS2 signal output terminal.
75	P12	O	DEF SW signal output terminal.
76	P13	O	WIPE SW signal output terminal.
77	P14	O	P14 signal output terminal.
78	VDD	–	Power supply terminal.
79	P15	O	P15 signal output terminal.
80	TSTIN	I	Test signal input terminal.
81	TESTO	O	Test signal output terminal.
82	VBLK	I	VBLK signal input terminal.
83	HBLK	I	HBLK signal input terminal.
84	EROMS	O	EROMS signal output terminal.
85	RAMS	O	RAMS signal output terminal.
86	P30	O	OE signal output terminal.
87	P31	O	CCLK Pulse output terminal.
88	P32	O	P32 signal output terminal.
89	P33	O	P33 signal output terminal.
90	DATA0	I/O	DATA (LSB) input/output terminal between Microprocessor. (8-Bit)
91	VSS	–	Ground terminal.
92	DATA1	I/O	DATA input/out terminals between Microprocessor. (8-Bit)
93	DATA2	I/O	
94	DATA3	I/O	
95	DATA4	I/O	
96	DATA5	I/O	
97	DATA6	I/O	
98	DATA7	I/O	(MSB)
99	ADR0	I	(LSB) Address input terminals from Microprocessor. (16-Bit)
100	ADR1	I	

2. IC2 on the System Control Board is using the Microprocessor IC MN18885.
Description of this IC is as follows:


63 P11
62 P12
61 P13
60 P14
59 P15
58 P16
57 P17
56 TCIO0
55 TCIO1
54 TCIO2
53 RXD
52 TXD
51 SBO
50 SBI
49 SBT
48 P30
47 P31
46 P32
45 P33
44 P34
43 P35
P10 64
DATA7 65
DATA6 66
DATA5 67
DATA4 68
DATA3 69
DATA2 70
DATA1 71
DATA0 72
VDD 73
AVDD 74
VREF(+) 75
DAC3 76
DAC2 77
DAC1 78
DAC0 79
ADC3 80
ADC2 81
ADC1 82
ADC0 83
VREF(–) 84
42 P36
41 P37
40 IRQ0
39 IRQ1
38 IRQ2
37 IRQ3
36 VDD
35 XO
34 XI
33 VSS
32 OSC2
31 OSC1
30 RST
29 P40
28 P41
27 P42
26 P43
25 P44
24 P45
23 P46
22 P47
MN18885
1 S/H
2 AVSS
3 VSS
4 ADR15
5 ADR14
6 ADR13
7 ADR12
8 ADR11
9 ADR10
10 ADR9
11 ADR8
12 ADR7
13 ADR6
14 ADR5
15 ADR4
16 ADR3
17 ADR2
18 ADR1
19 ADR0
20 EXI
21 EXO

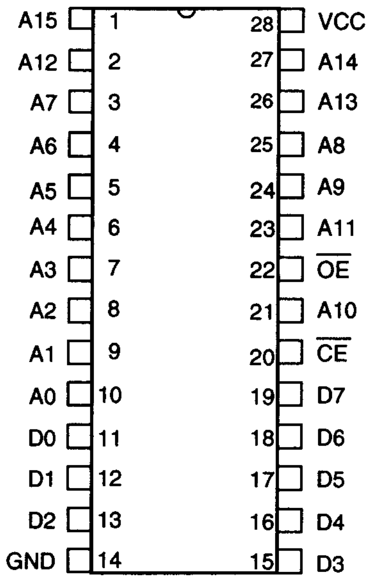
(TOP VIEW)

Pin	Name	I/O	Description
1	S/H	I/O	S/H signal input/output terminal.
2	AVSS	–	Ground terminal.
3	VSS	–	Ground terminal.
4	ADR15	O	(MSB) Address output terminals for Microprocessor I/O Expander IC. (16-Bit)
5	ADR14	O	
6	ADR13	O	
7	ADR12	O	
8	ADR11	O	
9	ADR10	O	
10	ADR9	O	
11	ADR8	O	
12	ADR7	O	

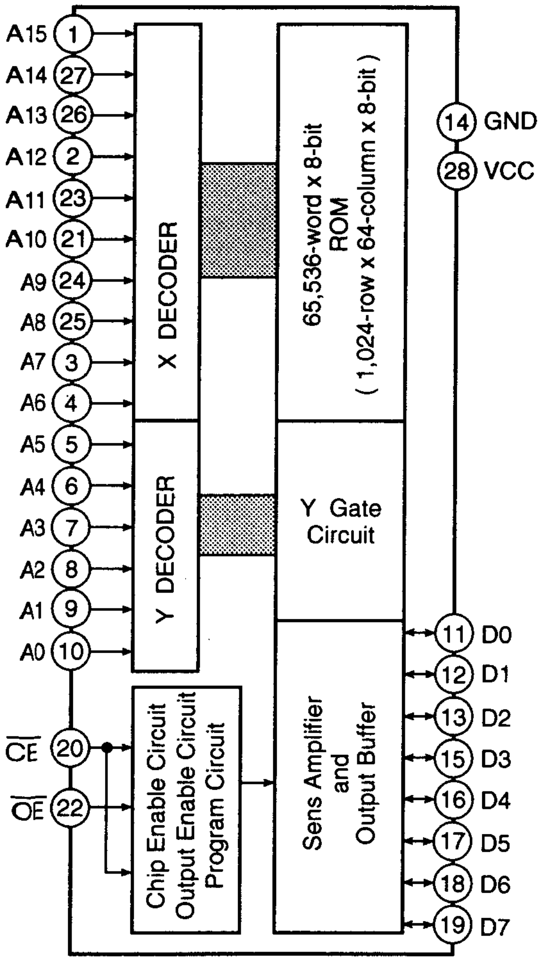
Pin	Name	I/O	Description
13	ADR6	O	Address output terminals for Microprocessor I/O Expander IC. (16-Bit)
14	ADR5	O	
15	ADR4	O	
16	ADR3	O	
17	ADR2	O	
18	ADR1	O	
19	ADR0	O	(LSB)
20	EXI	I	EXI signal input terminal.
21	EXO	O	EXO signal output terminal.
22	P47	O	Read enable signal output terminal.
23	P46	O	Write enable signal output terminal.

Pin	Name	I/O	Description
24	P45	O	P45 signal output terminal.
25	P44	O	P44 signal output terminal.
26	P43	O	P43 signal output terminal.
27	P42	O	P42 signal output terminal.
28	P41	O	S1N signal output terminal.
29	P40	O	S0N signal output terminal.
30	RST	I	Reset signal input terminal.
31	OSC1	I	Oscillator input terminal.
32	OSC2	O	Oscillator output terminal.
33	VSS	–	Ground terminal.
34	XI	I	XI signal input terminal.
35	XO	O	XO signal output terminal.
36	VDD	–	Power supply terminal.
37	IRQ3	I	IRQ3 signal input terminal.
38	IRQ2	I	Power off signal input terminal.
39	IRQ1	I	VD signal input terminal.
40	IRQ0	I	LMW signal input terminal.
41	P37	O	STB signal output terminal.
42	P36	O	LD signal output terminal.
43	P35	O	SEL3 signal output terminal.
44	P34	O	SEL2 signal output terminal.
45	P33	O	SEL1 signal output terminal.
46	P32	O	P32 signal output terminal.
47	P31	O	SYNCSW signal output terminal.
48	P30	O	SHUTTA signal output terminal.
49	SBT	O	SBT signal output terminal.
50	SBI	I	SBI signal input terminal.
51	SBO	O	YOUT3 signal output terminal.
52	TXD	O	TXD signal output terminal.
53	RXD	I	RXD signal input terminal.
54	TCIO2	I	BUSY signal input terminal.
55	TCIO1	I	Data Input Switch terminal.
56	TCIO0	I	WHD signal input terminal.
57	P17	O	VDRST signal output terminal.
58	P16	O	FLD/FRM signal output terminal.
59	P15	O	GAMMA SW signal output terminal.
60	P14	O	IRIS-R/A signal output terminal.
61	P13	O	P13 signal output terminal.
62	P12	O	P12 signal output terminal.
63	P11	O	P11 signal output terminal.
64	P10	O	AWCCNT signal output terminal.
65	DATA7	I/O	(MSB) Data input/output terminals between Microprocessor I/O Expander IC. (8-Bit)
66	DATA6	I/O	
67	DATA5	I/O	
68	DATA4	I/O	
69	DATA3	I/O	
70	DATA2	I/O	
71	DATA1	I/O	
72	DATA0	I/O	(LSB)
73	VDD	–	Power supply terminal.
74	AVDD	–	Power supply terminal.
75	VREF(+)	I	Reference Voltage (+) input terminal.
76	DAC3	O	D/A Converter 3 output terminal.
77	DAC2	O	D/A Converter 2 output terminal.
78	DAC1	O	D/A Converter 1 output terminal.
79	DAC0	O	D/A Converter 0 output terminal.
80	ADC3	I	A/D Converter 3 input terminal.
81	ADC2	I	A/D Converter 2 input terminal.
82	ADC1	I	A/D Converter 1 input terminal.
83	ADC0	I	A/D Converter 0 input terminal.
84	VREF(–)	I	Reference Voltage (–) input terminal.

3. IC3 on the System Control Board is using the One-time Programmable ROM IC YWM27C512F51.
Description of this IC is as follows:

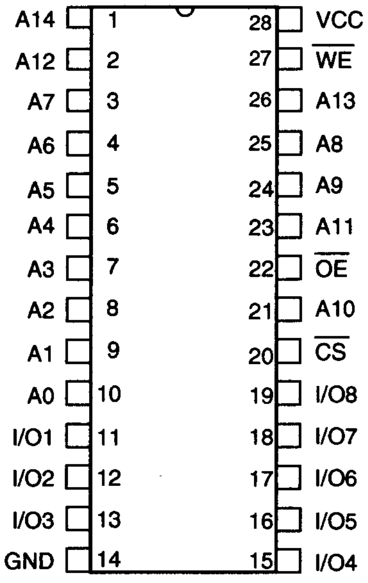

A15 1
A12 2
A7 3
A6 4
A5 5
A4 6
A3 7
A2 8
A1 9
A0 10
D0 11
D1 12
D2 13
GND 14
28 VCC
27 A14
26 A13
25 A8
24 A9
23 A11
22 $\overline{OE}$
21 A10
20 $\overline{CE}$
19 D7
18 D6
17 D5
16 D4
15 D3

(TOP VIEW)

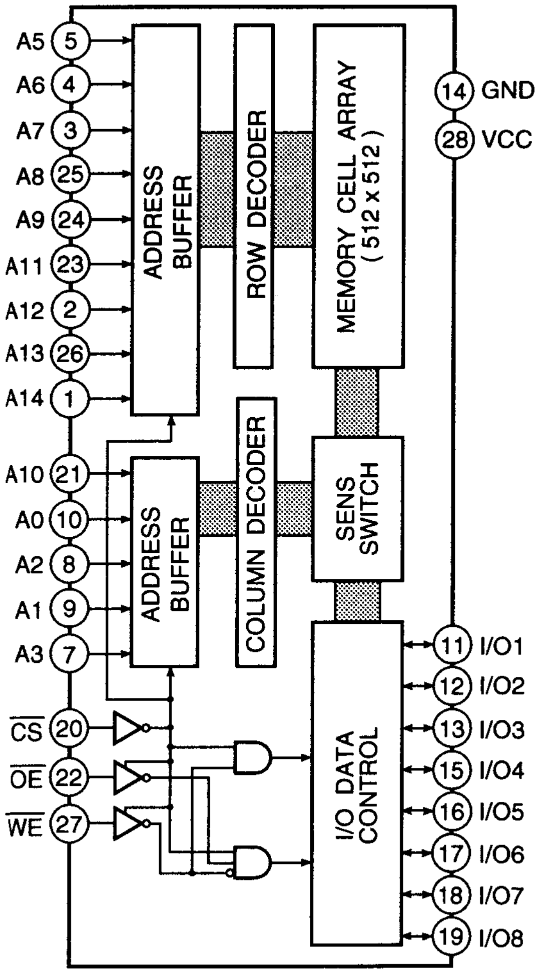

A15 1
A14 27
A13 26
A12 2
A11 23
A10 21
A9 24
A8 25
A7 3
A6 4
A5 5
A4 6
A3 7
A2 8
A1 9
A0 10
$\overline{CE}$ 20
$\overline{OE}$ 22
X DECODER
Y DECODER
65,536-word x 8-bit ROM (1,024-row x 64-column x 8-bit)
Y Gate Circuit
Sens Amplifier and Output Buffer
Chip Enable Circuit Output Enable Circuit Program Circuit
14 GND
28 VCC
11 D0
12 D1
13 D2
15 D3
16 D4
17 D5
18 D6
19 D7

Pin	Name	I/O	Description
1	A15	I	(MSB) Address input terminals. (16-Bit)
2	A12	I	
3	A7	I	
4	A6	I	
5	A5	I	
6	A4	I	
7	A3	I	
8	A2	I	
9	A1	I	
10	A0	I	(LSB)
11	D0	I/O	(LSB) Data input/output terminals. (8-Bit)
12	D1	I/O	
13	D1	I/O	
14	GND	–	Ground terminal.
15	D1	I/O	Data input/output terminals. (8-Bit)
16	D1	I/O	
17	D1	I/O	
18	D1	I/O	
19	D1	I/O	(MSB)
20	$\overline{CE}$	I	Chip enable signal input terminal.
21	A10	I	Address input terminals. (16-Bit)
22	$\overline{OE}$	I	Output enable signal input terminal.
23	A11	I	Address input terminals. (16-Bit)
24	A9	I	
25	A8	I	
26	A13	I	
27	A14	I	
28	VCC	–	Power supply terminal.

4. IC4 on the System Control Board is using the Static RAM IC YW43256AGU10L.
Description of this IC is as follows:


A14 1
A12 2
A7 3
A6 4
A5 5
A4 6
A3 7
A2 8
A1 9
A0 10
I/O1 11
I/O2 12
I/O3 13
GND 14
28 VCC
27 $\overline{\text{WE}}$
26 A13
25 A8
24 A9
23 A11
22 $\overline{\text{OE}}$
21 A10
20 $\overline{\text{CS}}$
19 I/O8
18 I/O7
17 I/O6
16 I/O5
15 I/O4

(TOP VIEW)

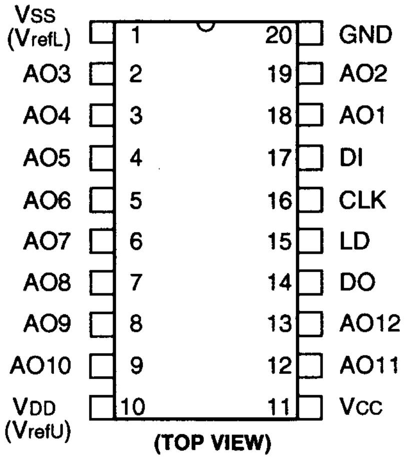

A5 5
A6 4
A7 3
A8 25
A9 24
A11 23
A12 2
A13 26
A14 1
A10 21
A0 10
A2 8
A1 9
A3 7
$\overline{\text{CS}}$ 20
$\overline{\text{OE}}$ 22
$\overline{\text{WE}}$ 27
ADDRESS BUFFER
ROW DECODER
MEMORY CELL ARRAY (512 x 512)
ADDRESS BUFFER
COLUMN DECODER
SENS SWITCH
I/O DATA CONTROL
14 GND
28 VCC
11 I/O1
12 I/O2
13 I/O3
15 I/O4
16 I/O5
17 I/O6
18 I/O7
19 I/O8

Pin	Name	I/O	Description
1	A14	I	(MSB) Address input terminals. (15-Bit)
2	A12	I	
3	A7	I	
4	A6	I	
5	A5	I	
6	A4	I	
7	A3	I	
8	A2	I	
9	A1	I	
10	A0	I	(LSB)
11	I/O1	I/O	(LSB) Data input/output terminals. (8-Bit)
12	I/O2	I/O	
13	I/O3	I/O	
14	GND	–	Ground terminal.
15	I/O4	I/O	Data input/output terminals. (8-Bit)
16	I/O5	I/O	
17	I/O6	I/O	
18	I/O7	I/O	
19	I/O8	I/O	(MSB)
20	$\overline{\text{CS}}$	I	Chip Select signal input terminal.
21	A10	I	Address input terminals. (15-Bit)
22	$\overline{\text{OE}}$	I	Output enable signal input terminal.
23	A11	I	Address input terminals. (15-Bit)
24	A9	I	
25	A8	I	
26	A13	I	
27	$\overline{\text{WE}}$	I	Write enable signal input terminal.
28	VCC	–	Power supply terminal.

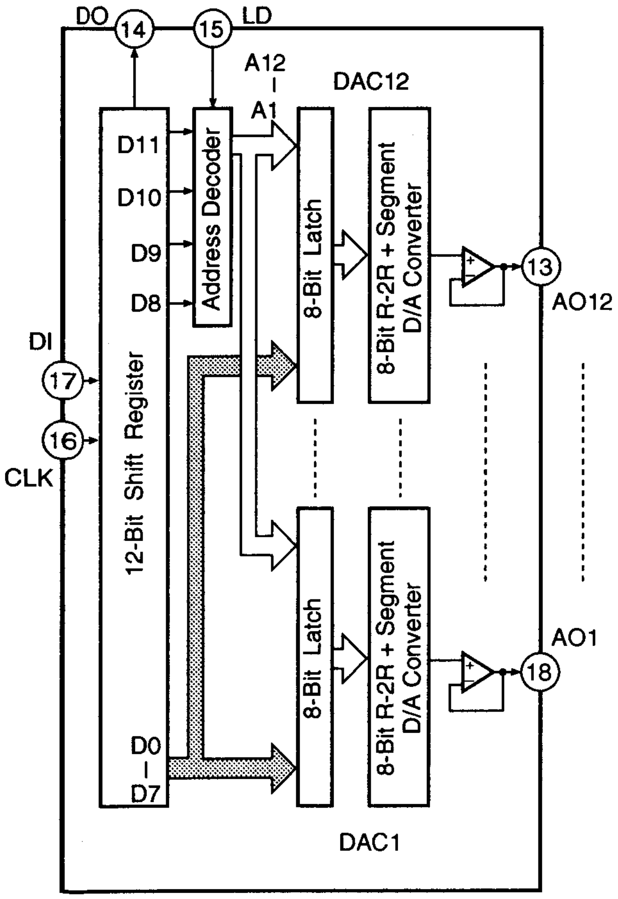
$\overline{\text{CS}}$	$\overline{\text{OE}}$	$\overline{\text{WE}}$	MODE	FUNCTION
H	*	*	No Selection	High Impedance
L	H	H	Output disable	High Impedance
L	L	H	Read	DOUT
L	*	L	Write	DIN

* : Don't care

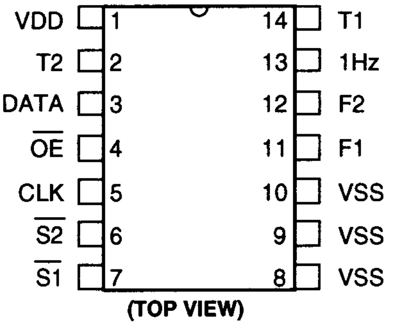
5. IC12 on the System Control Board is using the 12-ch D/A Converter IC YWM62352GP.
Description of this IC is as follows:


VSS (VrefL) 1
AO3 2
AO4 3
AO5 4
AO6 5
AO7 6
AO8 7
AO9 8
AO10 9
VDD (VrefU) 10
11 VCC
12 AO11
13 AO12
14 DO
15 LD
16 CLK
17 DI
18 AO1
19 AO2
20 GND
(TOP VIEW)

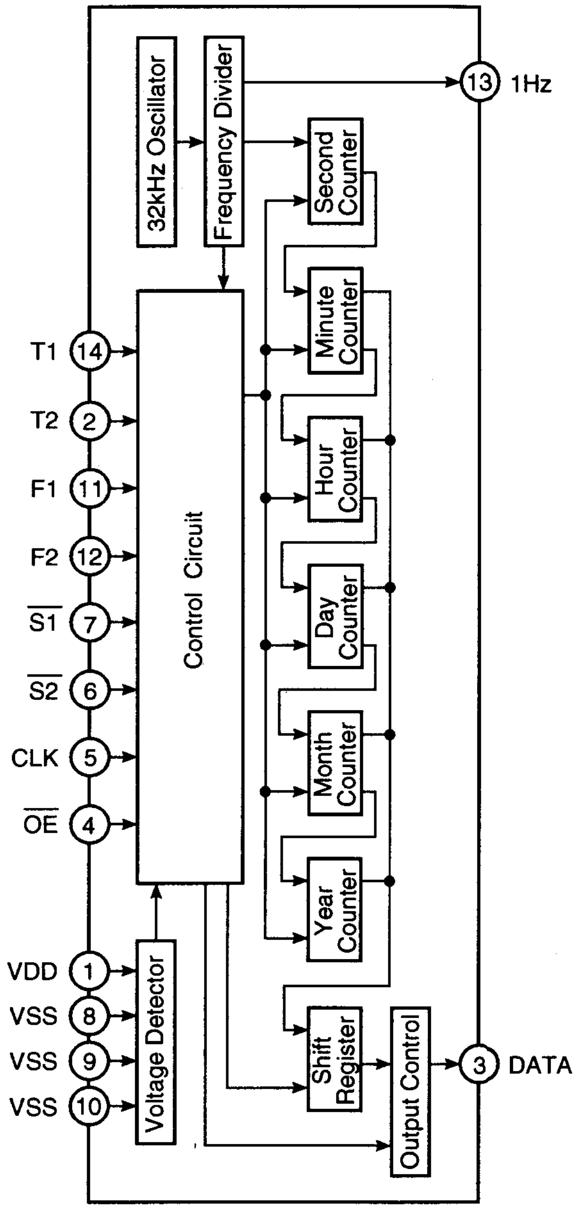
Pin	Name	I/O	Description
1	VSS (VrefL)	–	Lower reference voltage supply terminal for D/A Converter circuit.
2	AO3	O	Analog Data 3 output terminal.
3	AO4	O	Analog Data 4 output terminal.
4	AO5	O	Analog Data 5 output terminal.
5	AO6	O	Analog Data 6 output terminal.
6	AO7	O	Analog Data 7 output terminal.
7	AO8	O	Analog Data 8 output terminal.
8	AO9	O	Analog Data 9 output terminal.
9	AO10	O	Analog Data 10 output terminal.
10	VDD (VrefU)	–	Upper reference voltage supply terminal for D/A Converter circuit.
11	VCC	–	Power supply terminal terminal.
12	AO11	O	Analog Data 11 output terminal.
13	AO12	O	Analog Data 12 output terminal.
14	DO	O	MSB Data output terminal from 12-Bit Shift Register.
15	LD	I	Load signal input terminal. Data of 12-Bit Shift Register should be loaded to Decoder and D/A Output Registers when LD = H.
16	CLK	I	Shift Clock input terminal. Serial Data from DI terminal should be input to Decoder and 12-Bit Shift Register at raising edge of this signal.
17	DI	I	12-Bit Serial Data input terminal.
18	AO1	O	Analog Data 1 output terminal.
19	AO2	O	Analog Data 2 output terminal.
20	GND	–	Ground terminal.


DO 14
15 LD
A12 – A1
DAC12
D11
D10
D9
D8
Address Decoder
8-Bit Latch
8-Bit R-2R + Segment D/A Converter
13 AO12
DI 17
16 CLK
12-Bit Shift Register
8-Bit Latch
8-Bit R-2R + Segment D/A Converter
AO1 18
D0 – D7
DAC1

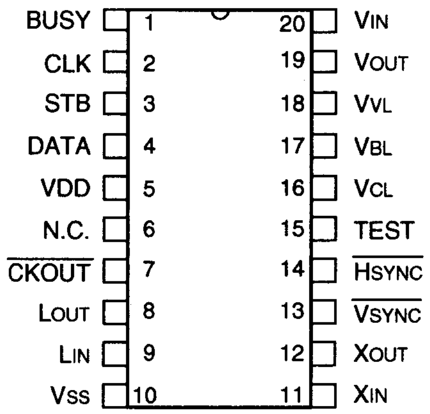
6. IC18 on the System Control Board is using the Real-time Clock IC YWRTC450315B.
Description of this IC is as follows:


VDD 1
T2 2
DATA 3
$\overline{OE}$ 4
CLK 5
$\overline{S2}$ 6
$\overline{S1}$ 7
8 VSS
9 VSS
10 VSS
11 F1
12 F2
13 1Hz
14 T1
(TOP VIEW)

Pin	Name	I/O	Description
1	VDD	–	Power supply terminal. Normally 1.5V.
2	T2	I	Test terminal 2. Normally connect at VSS.
3	DATA	O	Data outpuput terminal. Data should be output when $\overline{OE}$ terminal is at "L".
4	OE	I	Output enable signal input terminal.
5	CLK	I	Clock Pulse input terminal.
6	$\overline{S2}$	I	$\overline{S2}$ signal input terminal. Active at "L".
7	$\overline{S1}$	I	$\overline{S1}$ signal input terminal. Active at "L".
8	VSS	–	Ground terminal.
9	VSS	–	Ground terminal.
10	VSS	–	Ground terminal.
11	F1	I	F1 signal input terminal.
12	F2	I	F2 signal input terminal.
13	1Hz	O	1Hz Pulse output terminal. 50% duty cycle.
14	T1	I	Test terminal 1. Normally connect at VSS.


32kHz Oscillator
Frequency Divider
Second Counter
Minute Counter
Hour Counter
Day Counter
Month Counter
Year Counter
Shift Register
Output Control
Control Circuit
Voltage Detector
13 1Hz
T1 14
T2 2
F1 11
F2 12
$\overline{S1}$ 7
$\overline{S2}$ 6
CLK 5
$\overline{OE}$ 4
VDD 1
VSS 8
VSS 9
VSS 10
3 DATA

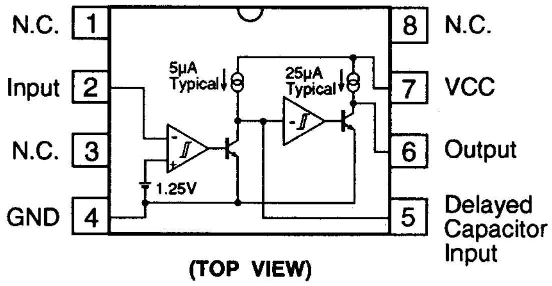
7. IC17 on the System Control Board is using the On-screen Display IC YWUPD6450601.
Description of this IC is as follows:


BUSY
CLK
STB
DATA
VDD
N.C.
CKOUT
LOUT
LIN
Vss
1
2
3
4
5
6
7
8
9
10
20
19
18
17
16
15
14
13
12
11
VIN
VOUT
VVL
VBL
VCL
TEST
HSYNC
VSYNC
XOUT
XIN

(TOP VIEW)

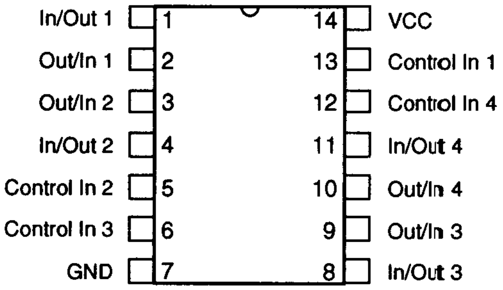
Pin	Name	I/O	Description
1	BUSY	O	Busy signal output terminal.
2	CLK	I	Serial Clock input terminal.
3	STB	I	Strobe signal input terminal.
4	DATA	I	Serial Data input terminal.
5	VDD	–	Power supply terminal.
6	N.C.	–	Non connection.
7	$\overline{\text{CKOUT}}$	O	Clock Pulse output terminal for Oscillation frequency check.
8	LOUT	O	LC Oscillator output terminal.
9	LIN	I	LC Oscillator input terminal.
10	VSS	–	Ground terminal.
11	XIN	I	Crystal Oscillator input terminal.
12	XOUT	O	Crystal Oscillator output terminal.
13	$\overline{\text{VSYNC}}$	I	Vertical Sync signal input terminal.
14	$\overline{\text{HSYNC}}$	I	Horizontal Sync signal input terminal.
15	TEST	–	Test terminal.
16	VCL	I	VCL signal input terminal.
17	VBL	I	VBL signal input terminal.
18	VVL	I	VVL signal input terminal.
19	VOUT	O	Video signal output terminal.
20	VIN	I	Video signal input terminal.

8. IC10 and IC15 on the System Control Board are using the Voltage Detector IC YWM51957AFP.
Description of this IC is as follows:


N.C.
1
Input
2
N.C.
3
GND
4
8
N.C.
7
VCC
6
Output
5
Delayed Capacitor Input
5μA Typical
25μA Typical
1.25V

(TOP VIEW)

9. IC18 on the System Control Board, IC3 and IC4 on the Mother Board are using the Quad Analog Switches/Multiplexers/Demultiplexers IC UPD4066 BG.
Description of this IC is as follows:

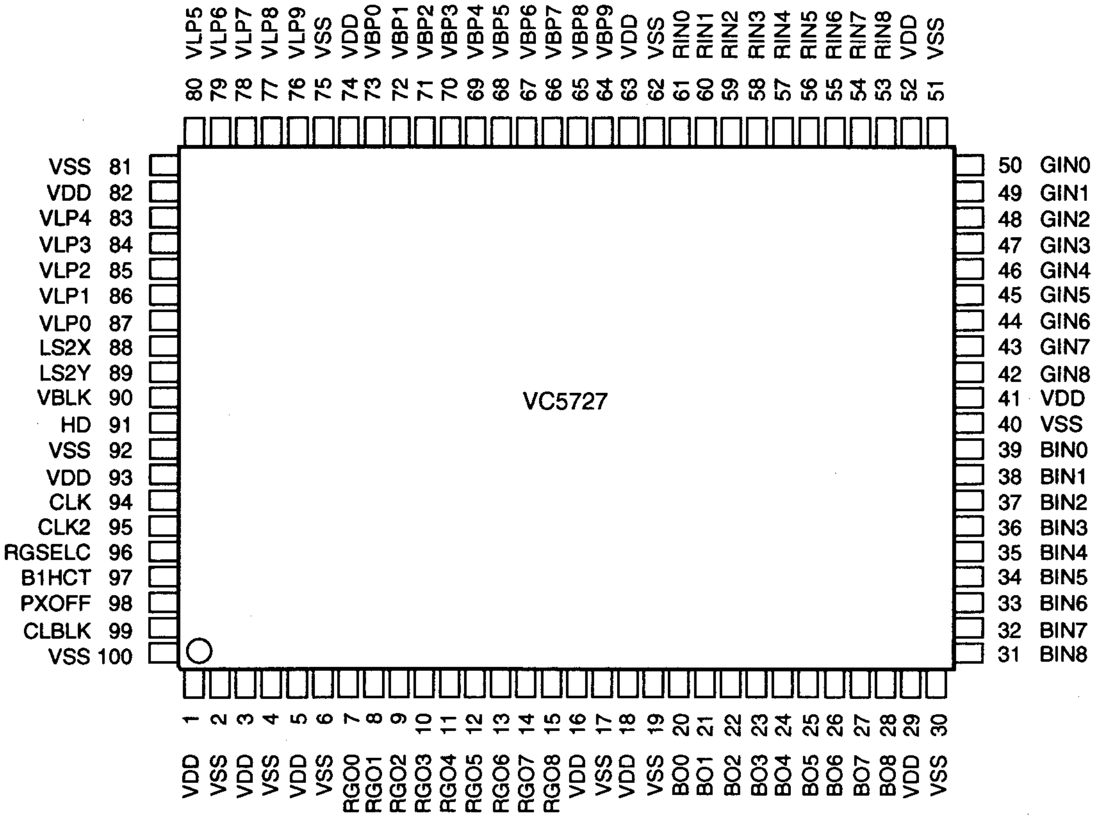

In/Out 1
Out/In 1
Out/In 2
In/Out 2
Control In 2
Control In 3
GND
1
2
3
4
5
6
7
14
13
12
11
10
9
8
VCC
Control In 1
Control In 4
In/Out 4
Out/In 4
Out/In 3
In/Out 3

(TOP VIEW)

Truth Table

Input	Switch
Control	I/O – O/I
L	OFF
H	ON

10. IC2 on the Digital Process Board is using the Gate Array Logic IC YWVC5727.
Description of this IC is as follows:


VC5727
80 VLP5
79 VLP6
78 VLP7
77 VLP8
76 VLP9
75 VSS
74 VDD
73 VBP0
72 VBP1
71 VBP2
70 VBP3
69 VBP4
68 VBP5
67 VBP6
66 VBP7
65 VBP8
64 VBP9
63 VDD
62 VSS
61 RIN0
60 RIN1
59 RIN2
58 RIN3
57 RIN4
56 RIN5
55 RIN6
54 RIN7
53 RIN8
52 VDD
51 VSS
VSS 81
VDD 82
VLP4 83
VLP3 84
VLP2 85
VLP1 86
VLP0 87
LS2X 88
LS2Y 89
VBLK 90
HD 91
VSS 92
VDD 93
CLK 94
CLK2 95
RGSELC 96
B1HCT 97
PXOFF 98
CLBLK 99
VSS 100
50 GIN0
49 GIN1
48 GIN2
47 GIN3
46 GIN4
45 GIN5
44 GIN6
43 GIN7
42 GIN8
41 VDD
40 VSS
39 BIN0
38 BIN1
37 BIN2
36 BIN3
35 BIN4
34 BIN5
33 BIN6
32 BIN7
31 BIN8
1 VDD
2 VSS
3 VDD
4 VSS
5 VDD
6 VSS
7 RGO0
8 RGO1
9 RGO2
10 RGO3
11 RGO4
12 RGO5
13 RGO6
14 RGO7
15 RGO8
16 VDD
17 VSS
18 VDD
19 VSS
20 BO0
21 BO1
22 BO2
23 BO3
24 BO4
25 BO5
26 BO6
27 BO7
28 BO8
29 VDD
30 VSS

(TOP VIEW)

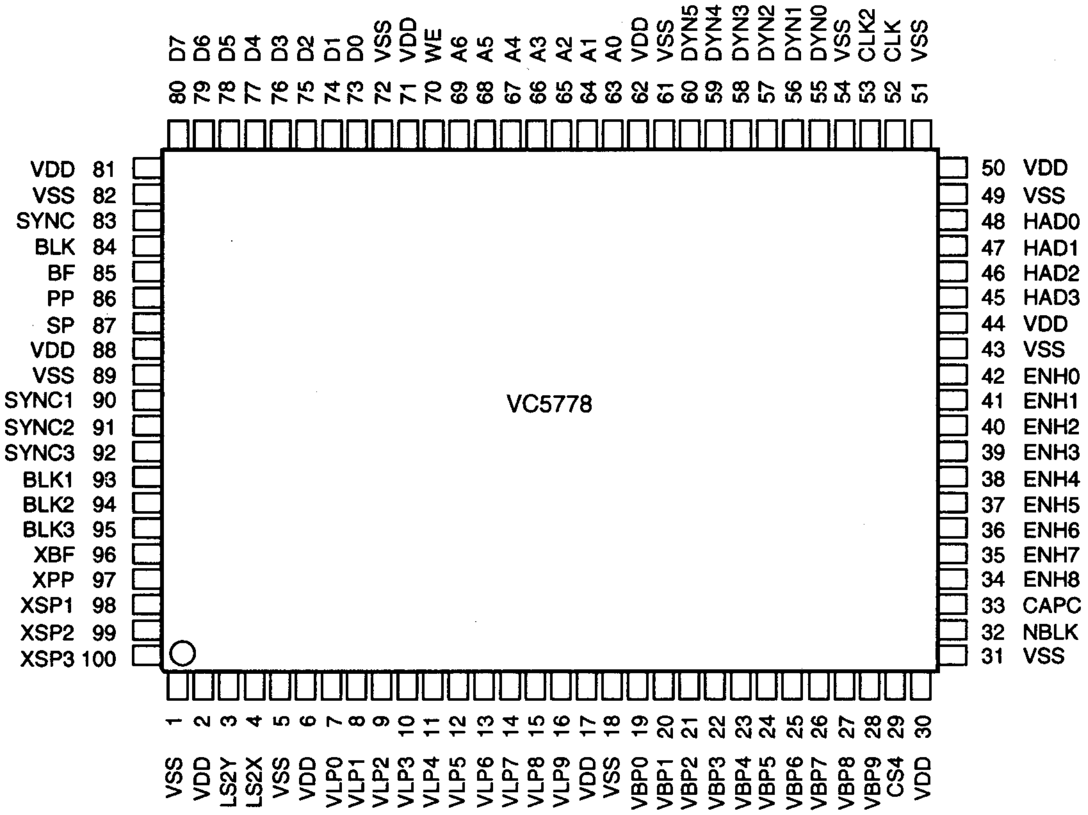
Pin	Name	I/O	Description
1	VDD	–	Power supply terminal for I/O.
2	VSS	–	Ground terminal for I/O.
3	VDD	–	Power supply terminal for I/O.
4	VSS	–	Ground terminal for I/O.
5	VDD	–	Power supply terminal for I/O.
6	VSS	–	Ground terminal for I/O.
7	RGO0	O	(LSB) RG23 signal output terminals. (9-Bit)
8	RGO1	O	
9	RGO2	O	
10	RGO3	O	
11	RGO4	O	
12	RGO5	O	
13	RGO6	O	
14	RGO7	O	
15	RGO8	O	(MSB)
16	VDD	–	Power supply terminal for I/O.

Pin	Name	I/O	Description
17	VSS	–	Ground terminal for Core.
18	VDD	–	Power supply terminal for Core.
19	VSS	–	Ground terminal for I/O.
20	BO0	O	(LSB) B23 signal output terminals. (9-Bit)
21	BO1	O	
22	BO2	O	
23	BO3	O	
24	BO4	O	
25	BO5	O	
26	BO6	O	
27	BO7	O	
28	BO8	O	(MSB)
29	VDD	–	Power supply terminal for I/O.
30	VSS	–	Ground terminal for I/O.
31	BIN8	I	(MSB) B12 signal input terminals. (9-Bit)
32	BIN7	I	

Pin	Name	I/O	Description
33	BIN6	I	B12 signal input terminals. (9-Bit)
34	BIN5	I	
35	BIN4	I	
36	BIN3	I	
37	BIN2	I	
38	BIN1	I	
39	BIN0	I	(LSB)
40	VSS	–	Ground terminal for Core.
41	VDD	–	Power supply terminal for Core.
42	GIN8	I	(MSB) G12 signal input terminals. (9-Bit)
43	GIN7	I	
44	GIN6	I	
45	GIN5	I	
46	GIN4	I	
47	GIN3	I	
48	GIN2	I	
49	GIN1	I	
50	GIN0	I	(LSB)
51	VSS	–	Ground terminal for I/O.
52	VDD	–	Power supply terminal for I/O.
53	RIN8	I	(MSB) R12 signal input terminals. (9-Bit)
54	RIN7	I	
55	RIN6	I	
56	RIN5	I	
57	RIN4	I	
58	RIN3	I	
59	RIN2	I	
60	RIN1	I	
61	RIN0	I	(LSB)
62	VSS	–	Ground terminal for I/O.
63	VDD	–	Power supply terminal for I/O.
64	VBP9	O	(MSB) VB24 signal output terminals. (10-Bit)
65	VBP8	O	
66	VBP7	O	
67	VBP6	O	
68	VBP5	O	
69	VBP4	O	
70	VBP3	O	
71	VBP2	O	
72	VBP1	O	
73	VBP0	O	(LSB)
74	VDD	–	Power supply terminal for I/O.

Pin	Name	I/O	Description
75	VSS	–	Ground terminal for I/O.
76	VLP9	O	(MSB) VL24 signal output terminals. (10-Bit)
77	VLP8	O	
78	VLP7	O	
79	VLP6	O	
80	VLP5	O	
81	VSS	–	Ground terminal for Core.
82	VDD	–	Power supply terminal for Core.
83	VLP4	O	VL24 signal output terminals. (10-Bit)
84	VLP3	O	
85	VLP2	O	
86	VLP1	O	
87	VLP0	O	(LSB)
88	LS2X	I	LS2X signal input terminal.
89	LS2Y	I	LS2Y signal input terminal.
90	VBLK	I	VBLK signal input terminal.
91	HD	I	HD signal input terminal.
92	VSS	–	Ground terminal for I/O.
93	VDD	–	Power supply terminal for Core.
94	CLK	I	CLK signal input terminal.
95	CLK2	I	CLK2 signal input terminal.
96	RGSELC	I	RGSELC signal input terminal.
97	B1HCT	I	B1HCT signal input terminal.
98	PXOFF	I	PXOFF signal input terminal.
99	CLBLK	I	CLBLK signal input terminal.
100	VSS	–	Ground terminal for Core.

11. IC4 on the Digital Process Board is using the Gate Array Logic IC YWVC5778.
Description of this IC is as follows:


VC5778
1 VSS
2 VDD
3 LS2Y
4 LS2X
5 VSS
6 VDD
7 VLP0
8 VLP1
9 VLP2
10 VLP3
11 VLP4
12 VLP5
13 VLP6
14 VLP7
15 VLP8
16 VLP9
17 VDD
18 VSS
19 VBP0
20 VBP1
21 VBP2
22 VBP3
23 VBP4
24 VBP5
25 VBP6
26 VBP7
27 VBP8
28 VBP9
29 CS4
30 VDD
31 VSS
32 NBLK
33 CAPC
34 ENH8
35 ENH7
36 ENH6
37 ENH5
38 ENH4
39 ENH3
40 ENH2
41 ENH1
42 ENH0
43 VSS
44 VDD
45 HAD3
46 HAD2
47 HAD1
48 HAD0
49 VSS
50 VDD
51 VSS
52 CLK
53 CLK2
54 VSS
55 DYN0
56 DYN1
57 DYN2
58 DYN3
59 DYN4
60 DYN5
61 VSS
62 VDD
63 A0
64 A1
65 A2
66 A3
67 A4
68 A5
69 A6
70 WE
71 VDD
72 VSS
73 D0
74 D1
75 D2
76 D3
77 D4
78 D5
79 D6
80 D7
VDD 81
VSS 82
SYNC 83
BLK 84
BF 85
PP 86
SP 87
VDD 88
VSS 89
SYNC1 90
SYNC2 91
SYNC3 92
BLK1 93
BLK2 94
BLK3 95
XBF 96
XPP 97
XSP1 98
XSP2 99
XSP3 100

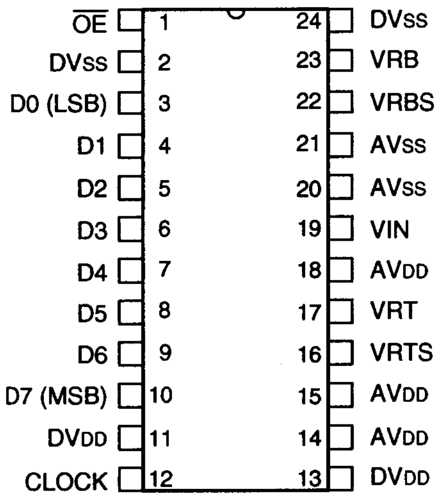
(TOP VIEW)

Pin	Name	I/O	Description
1	VSS	–	Ground terminal for I/O.
2	VDD	–	Power supply terminal for I/O.
3	LS2Y	O	LS2Y signal output terminal.
4	LS2X	O	LS2X signal output terminal.
5	VSS	–	Ground terminal for I/O.
6	VDD	–	Power supply terminal for I/O.
7	VLP0	I	(LSB)
8	VLP1	I	
9	VLP2	I	
10	VLP3	I	
11	VLP4	I	VL24 signal input terminals. (10-Bit)
12	VLP5	I	
13	VLP6	I	
14	VLP7	I	
15	VLP8	I	
16	VLP9	I	(MSB)

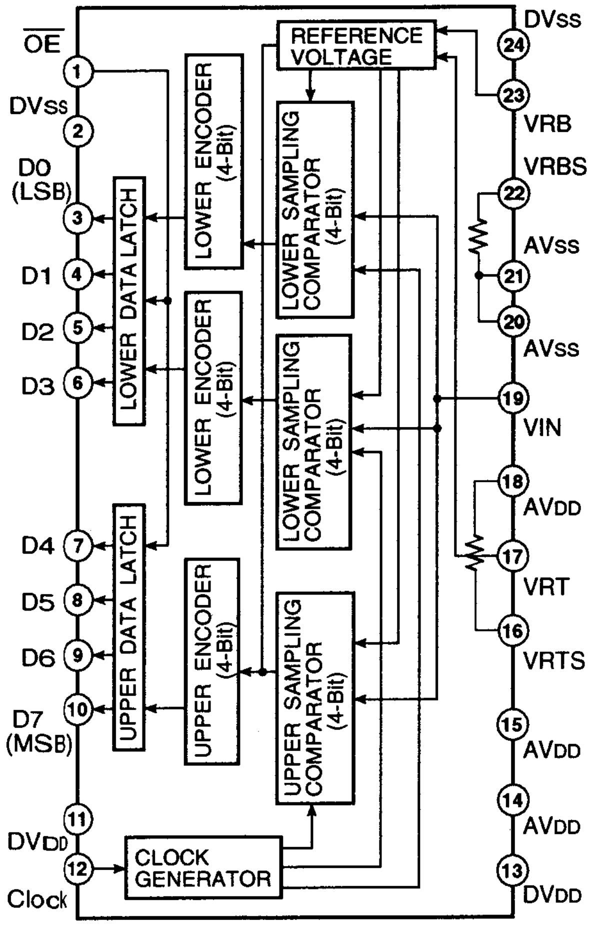
Pin	Name	I/O	Description
17	VDD	–	Power supply terminal for Core.
18	VSS	–	Ground terminal for Core.
19	VBP0	I	(LSB)
20	VBP1	I	
21	VBP2	I	
22	VBP3	I	
23	VBP4	I	VB24 signal input terminals. (10-Bit)
24	VBP5	I	
25	VBP6	I	
26	VBP7	I	
27	VBP8	I	
28	VBP9	I	(MSB)
29	CS4	I	CS4 signal input terminal.
30	VDD	–	Power supply terminal for I/O.
31	VSS	–	Ground terminal for I/O.
32	NBLK	O	NBLK signal output terminal.

Pin	Name	I/O	Description
33	CAPC	O	CAPC signal output terminal.
34	ENH8	O	(LSB) EN43 signal output terminals. (9-Bit)
35	ENH7	O	
36	ENH6	O	
37	ENH5	O	
38	ENH4	O	
39	ENH3	O	
40	ENH2	O	
41	ENH1	O	
42	ENH0	O	(MSB)
43	VSS	–	Ground terminal for I/O.
44	VDD	–	Power supply terminal for I/O.
45	HAD3	I	HAD3 signal input terminal.
46	HAD2	I	HAD2 signal input terminal.
47	HAD1	I	HAD1 signal input terminal.
48	HAD0	I	HAD0 signal input terminal.
49	VSS	–	Ground terminal for Core.
50	VDD	–	Power supply terminal for Core.
51	VSS	–	Ground terminal for I/O.
52	CLK	I	CLK1 Pulse input terminal.
53	CLK2	I	CLK2 Pulse input terminal.
54	VSS	–	Ground terminal for I/O.
55	DYN0	I	(MSB) DYN signal input terminals. (6-Bit)
56	DYN1	I	
57	DYN2	I	
58	DYN3	I	
59	DYN4	I	
60	DYN5	I	(LSB)
61	VSS	–	Ground terminal for Core.
62	VDD	–	Power supply terminal for Core.
63	A0	I	(LSB) Address signal input terminals. (7-Bit)
64	A1	I	
65	A2	I	
66	A3	I	
67	A4	I	
68	A5	I	
69	A6	I	(MSB)
70	WE	I	Write enable signal input terminal.
71	VDD	–	Power supply terminal for I/O.
72	VSS	–	Ground terminal for I/O.
73	D0	I	(LSB) Data input terminals. (8-Bit)
74	D1	I	
75	D2	I	
76	D3	I	
77	D4	I	
78	D5	I	
79	D6	I	
80	D7	I	(MSB)
81	VDD	–	Power supply terminal for Core.
82	VSS	–	Ground terminal for Core.
83	SYNC	I	SYNC signal input terminal.
84	BLK	I	BLK signal input terminal.
85	BF	I	BF signal input terminal.
86	PP	I	PP signal input terminal.
87	SP	I	SP signal input terminal.
88	VDD	–	Power supply terminal for I/O.
89	VSS	–	Ground terminal for I/O.
90	SYNC1	O	SYNC1 signal output terminal.
91	SYNC2	O	SYNC2 signal output terminal.
92	SYNC3	O	SYNC3 signal output terminal.
93	BLK1	O	BLK1 signal output terminal.
94	BLK2	O	BLK2 signal output terminal.
95	BLK3	O	BLK3 signal output terminal.
96	XBF	O	XBF signal output terminal.
97	XPP	O	XPP signal output terminal.
98	XSP1	O	XSP1 signal output terminal.
99	XSP2	O	XSP2 signal output terminal.
100	XSP3	O	XSP3 signal output terminal.

12. IC6 to IC8 on the Digital Process Board are using the 8-Bit A/D Converter IC YWCX1175AM.
Description of this IC is as follows:

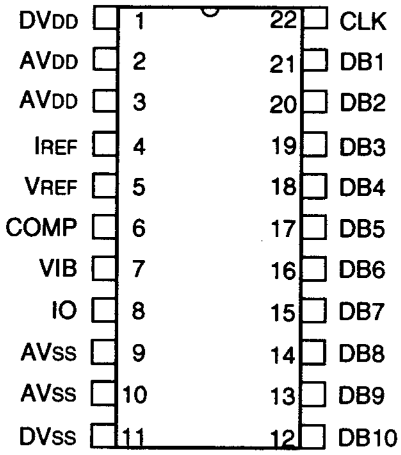

OE 1
DVss 2
D0 (LSB) 3
D1 4
D2 5
D3 6
D4 7
D5 8
D6 9
D7 (MSB) 10
DVDD 11
CLOCK 12
24 DVss
23 VRB
22 VRBS
21 AVss
20 AVss
19 VIN
18 AVDD
17 VRT
16 VRTS
15 AVDD
14 AVDD
13 DVDD

(TOP VIEW)

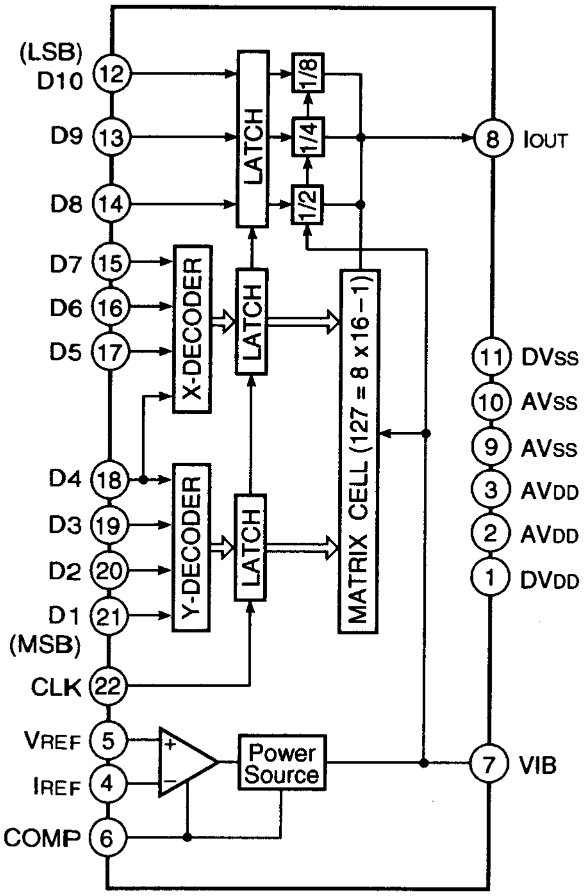

OE
DVss
D0 (LSB)
D1
D2
D3
D4
D5
D6
D7 (MSB)
DVDD
Clock
REFERENCE VOLTAGE
LOWER ENCODER (4-Bit)
LOWER ENCODER (4-Bit)
UPPER ENCODER (4-Bit)
LOWER DATA LATCH
UPPER DATA LATCH
LOWER SAMPLING COMPARATOR (4-Bit)
LOWER SAMPLING COMPARATOR (4-Bit)
UPPER SAMPLING COMPARATOR (4-Bit)
CLOCK GENERATOR
DVss
VRB
VRBS
AVss
AVss
VIN
AVDD
VRT
VRTS
AVDD
AVDD
DVDD

Pin	Name	I/O	Description
1	$\overline{\text{OE}}$	I	Output Enable signal input terminal.
2	DVSS	–	Ground terminal for Digital Circuit.
3	D0	O	Digital Data D0 (LSB) output terminal.
4	D1	O	Digital Data D1 (2nd.) output terminal.
5	D2	O	Digital Data D2 (3rd.) output terminal.
6	D3	O	Digital Data D3 (4th.) output terminal.
7	D4	O	Digital Data D4 (5th.) output terminal.
8	D5	O	Digital Data D5 (6th.) output terminal.
9	D6	O	Digital Data D6 (7th.) output terminal.
10	D7	O	Digital Data D7 (MSB) output terminal.
11	DVDD	–	Power supply terminal for Digital Circuit.
12	CLOCK	I	Clock input terminal.
13	DVDD	–	Power supply terminal for Digital Circuit.
14	AVDD	–	Power supply terminal for Analog Circuit.
15	AVDD	–	Power supply terminal for Analog Circuit.
16	VRTS	O	Top Voltage output terminal.
17	VRT	I	Top Voltage input terminal.
18	AVDD	–	Power supply terminal for Analog Circuit.
19	VIN	I	Analog signal input terminal.
20	AVSS	–	Ground terminal for Analog Circuit.
21	AVSS	–	Ground terminal for Analog Circuit.
22	VRBS	O	Bottom Voltage output terminal.
23	VRB	I	Bottom Voltage input terminal.
24	AVSS	–	Ground terminal for Digital Circuit.

13. IC17 to IC20 on the Digital Process Board are using the 10-Bit D/A Converter IC MN6557AS.
Description of this IC is as follows:

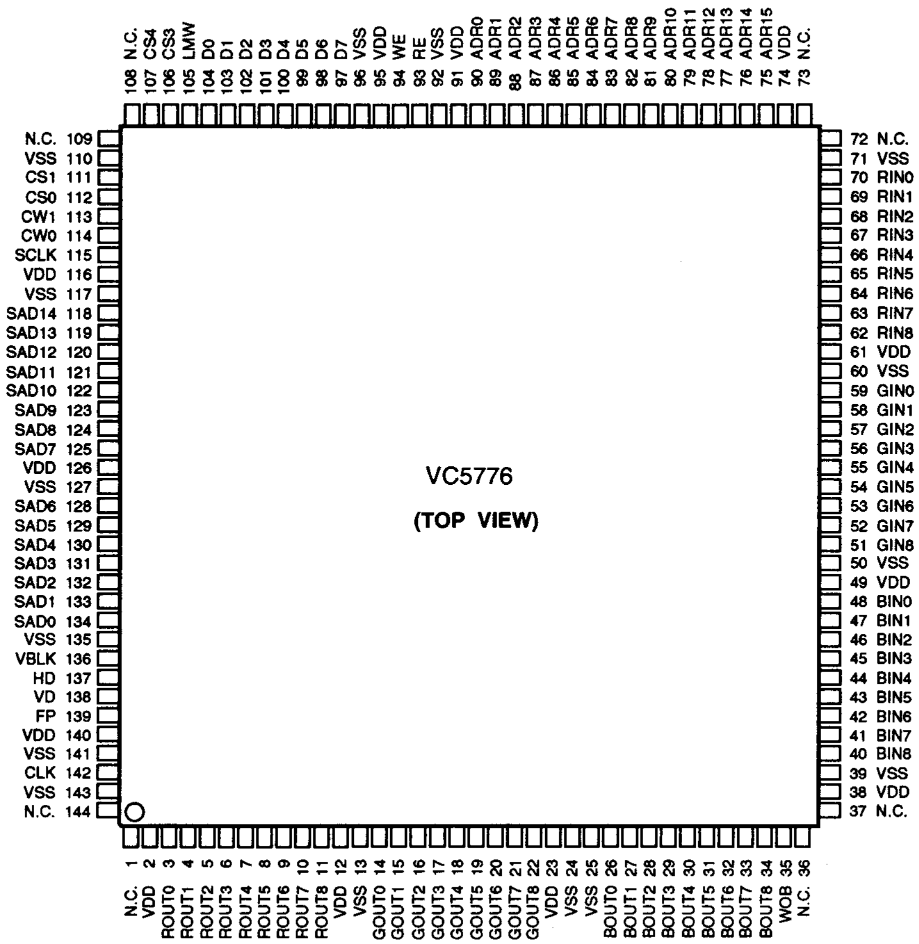

DVDD 1
AVDD 2
AVDD 3
IREF 4
VREF 5
COMP 6
VIB 7
IO 8
AVSS 9
AVSS 10
DVSS 11
22 CLK
21 DB1
20 DB2
19 DB3
18 DB4
17 DB5
16 DB6
15 DB7
14 DB8
13 DB9
12 DB10

(TOP VIEW)


(LSB) D10 12
D9 13
D8 14
D7 15
D6 16
D5 17
D4 18
D3 19
D2 20
D1 21 (MSB)
CLK 22
VREF 5
IREF 4
COMP 6
LATCH
1/8
1/4
1/2
X-DECODER
LATCH
Y-DECODER
LATCH
MATRIX CELL (127 = 8 x 16 − 1)
+
−
Power Source
8 IOUT
11 DVSS
10 AVSS
9 AVSS
3 AVDD
2 AVDD
1 DVDD
7 VIB

Pin	Name	I/O	Description
1	DVDD	–	Power supply terminal for Digital circuit.
2	AVDD	–	Power supply terminal for Analog circuit.
3	AVDD	–	Power supply terminal for Analog circuit.
4	IREF	I	Reference Current input terminal.
5	VREF	I	Reference Voltage input terminal.
6	COMP	I	Compensation input terminal.
7	VIB	I	VIB signal input terminal.
8	IO	O	Analog Data Current output terminal.
9	AVSS	–	Ground terminal for Analog Circuit.
10	AVSS	–	Ground terminal for Analog Circuit.
11	DVSS	–	Ground terminal for Digital Circuit.
12	DB10	I	(LSB)
13	DB9	I	
14	DB8	I	
15	DB7	I	
16	DB6	I	Digital Data input terminals. (10-Bit)
17	DB5	I	
18	DB4	I	
19	DB3	I	
20	DB2	I	
21	DB1	I	(MSB)
22	CLK	I	Clock Pulse input terminal.

14. IC1 on the Digital Process Board is using the Gate Array Logic IC YWVC5776.
Description of this IC is as follows:


108 N.C.
107 CS4
106 CS3
105 LMW
104 D0
103 D1
102 D2
101 D3
100 D4
99 D5
98 D6
97 D7
96 VSS
95 VDD
94 WE
93 RE
92 VSS
91 VDD
90 ADR0
89 ADR1
88 ADR2
87 ADR3
86 ADR4
85 ADR5
84 ADR6
83 ADR7
82 ADR8
81 ADR9
80 ADR10
79 ADR11
78 ADR12
77 ADR13
76 ADR14
75 ADR15
74 VDD
73 N.C.
N.C. 109
VSS 110
CS1 111
CS0 112
CW1 113
CW0 114
SCLK 115
VDD 116
VSS 117
SAD14 118
SAD13 119
SAD12 120
SAD11 121
SAD10 122
SAD9 123
SAD8 124
SAD7 125
VDD 126
VSS 127
SAD6 128
SAD5 129
SAD4 130
SAD3 131
SAD2 132
SAD1 133
SAD0 134
VSS 135
VBLK 136
HD 137
VD 138
FP 139
VDD 140
VSS 141
CLK 142
VSS 143
N.C. 144
72 N.C.
71 VSS
70 RIN0
69 RIN1
68 RIN2
67 RIN3
66 RIN4
65 RIN5
64 RIN6
63 RIN7
62 RIN8
61 VDD
60 VSS
59 GIN0
58 GIN1
57 GIN2
56 GIN3
55 GIN4
54 GIN5
53 GIN6
52 GIN7
51 GIN8
50 VSS
49 VDD
48 BIN0
47 BIN1
46 BIN2
45 BIN3
44 BIN4
43 BIN5
42 BIN6
41 BIN7
40 BIN8
39 VSS
38 VDD
37 N.C.
VC5776
(TOP VIEW)
1 N.C.
2 VDD
3 ROUT0
4 ROUT1
5 ROUT2
6 ROUT3
7 ROUT4
8 ROUT5
9 ROUT6
10 ROUT7
11 ROUT8
12 VDD
13 VSS
14 GOUT0
15 GOUT1
16 GOUT2
17 GOUT3
18 GOUT4
19 GOUT5
20 GOUT6
21 GOUT7
22 GOUT8
23 VDD
24 VSS
25 VSS
26 BOUT0
27 BOUT1
28 BOUT2
29 BOUT3
30 BOUT4
31 BOUT5
32 BOUT6
33 BOUT7
34 BOUT8
35 WOB
36 N.C.

Pin	Name	I/O	Description
1	N.C.	–	Non Connection.
2	VDD	–	Power supply terminal for I/O.
3	ROUT0	O	(LSB) R12 signal output terminals. (9-Bit)
4	ROUT1	O	
5	ROUT2	O	
6	ROUT3	O	
7	ROUT4	O	
8	ROUT5	O	
9	ROUT6	O	
10	ROUT7	O	
11	ROUT8	O	(MSB)
12	VDD	–	Power supply terminal for I/O.
13	VSS	–	Ground terminal for I/O.
14	GOUT0	O	(LSB) G12 signal output terminals. (9-Bit)

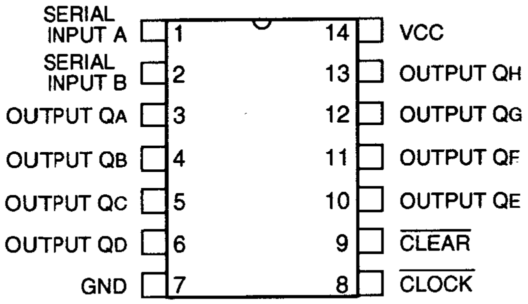
Pin	Name	I/O	Description
15	GOUT1	O	G12 signal output terminals. (9-Bit)
16	GOUT2	O	
17	GOUT3	O	
18	GOUT4	O	
19	GOUT5	O	
20	GOUT6	O	
21	GOUT7	O	
22	GOUT8	O	(MSB)
23	VDD	–	Power supply terminal for Core.
24	VSS	–	Ground terminal for Core.
25	VSS	–	Ground terminal for I/O.
26	BOUT0	O	(LSB) B12 signal output terminals. (9-Bit)
27	BOUT1	O	
28	BOUT2	O	

Pin	Name	I/O	Description
29	BOUT3	O	B12 signal output terminals. (9-Bit)
30	BOUT4	O	
31	BOUT5	O	
32	BOUT6	O	
33	BOUT7	O	
34	BOUT8	O	(MSB)
35	WOB	O	WOB signal output terminal.
36	N.C.	–	Non Connection.
37	N.C.	–	Non Connection.
38	VDD	–	Power supply terminal for I/O.
39	VSS	–	Ground terminal for I/O.
40	BIN8	I	(MSB) BA/D signal input terminals. (9-Bit)
41	BIN7	I	
42	BIN6	I	
43	BIN5	I	
44	BIN4	I	
45	BIN3	I	
46	BIN2	I	
47	BIN1	I	
48	BIN0	I	(LSB)
49	VDD	–	Power supply terminal for I/O.
50	VSS	–	Ground terminal for I/O.
51	GIN8	I	(MSB) GA/D signal input terminals. (9-Bit)
52	GIN7	I	
53	GIN6	I	
54	GIN5	I	
55	GIN4	I	
56	GIN3	I	
57	GIN2	I	
58	GIN1	I	
59	GIN0	I	(LSB)
60	VSS	–	Ground terminal for Core.
61	VDD	–	Power supply terminal for Core.
62	RIN8	I	(MSB) RA/D signal input terminals. (9-Bit)
63	RIN7	I	
64	RIN6	I	
65	RIN5	I	
66	RIN4	I	
67	RIN3	I	
68	RIN2	I	
69	RIN1	I	
70	RIN0	I	(LSB)
71	VSS	–	Ground terminal for I/O.
72	N.C.	–	Non Connection.
73	N.C.	–	Non Connection.
74	VDD	–	Power supply terminal for I/O.
75	ADR15	I	(MSB) Address input terminals. (16-Bit)
76	ADR14	I	
77	ADR13	I	
78	ADR12	I	

Pin	Name	I/O	Description
79	ADR11	I	Address input terminals. (16-Bit)
80	ADR10	I	
81	ADR9	I	
82	ADR8	I	
83	ADR7	I	
84	ADR6	I	
85	ADR5	I	
86	ADR4	I	
87	ADR3	I	
88	ADR2	I	
89	ADR1	I	
90	ADR0	I	(LSB)
91	VDD	–	Power supply terminal for Core.
92	VSS	–	Ground terminal for Core.
93	WE	I	Write enable signal input terminal.
94	RE	I	Read enable signal input terminal.
95	VDD	–	Power supply terminal for I/O.
96	VSS	–	Ground terminal for I/O.
97	D7	I/O	(MSB) Data Tri-state input/ outputterminals. (8-Bit)
98	D6	I/O	
99	D5	I/O	
100	D4	I/O	
101	D3	I/O	
102	D2	I/O	
103	D1	I/O	
104	D0	I/O	(LSB)
105	LMW	O	LMW signal output terminal.
106	CS3	O	CS3 signal output terminal.
107	CS4	O	CS4 signal output terminal.
108	N.C.	–	Non Connection.
109	N.C.	–	Non Connection.
110	VSS	–	Ground terminal for I/O.
111	CS1	O	CS1 signal output terminal.
112	CS0	O	CS0 signal output terminal.
113	CW1	O	CW1 signal output terminal.
114	CW0	O	CW0 signal output terminal.
115	SCLK	O	SCLK Pulse output terminal.
116	VDD	–	Power supply terminal for Core.
117	VSS	–	Ground terminal for Core.
118	SAD14	O	(MSB) SAD signal output terminals. (15-Bit)
119	SAD13	O	
120	SAD12	O	
121	SAD11	O	
122	SAD10	O	
123	SAD9	O	
124	SAD8	O	
125	SAD7	O	
126	VDD	–	Power supply terminal for I/O.

Pin	Name	I/O	Description
127	VDD	–	Power supply terminal for I/O.
128	SAD6	O	SAD signal outputput terminals. (15-Bit)
129	SAD5	O	
130	SAD4	O	
131	SAD3	O	
132	SAD2	O	
133	SAD1	O	
134	SAD0	O	(LSB)
135	VSS	–	Ground terminal for I/O.
136	VBLK	I	VBLK signal input terminal.
137	HD	I	HD signal input terminal.
138	VD	I	VD signal input terminal.
139	FP	I	FP signal input terminal.
140	VDD	–	Power supply terminal for I/O.
141	VSS	–	Ground terminal for I/O.
142	CLK	I	CLK Pulse input terminal.
143	VSS	–	Ground terminal for I/O.
144	N.C.	–	Non connection.

15. IC10 on the Digital Process Board is using the 8-Bit Shift Register IC YWHD74AC164F.
Description of this IC is as follows:


SERIAL INPUT A
SERIAL INPUT B
OUTPUT QA
OUTPUT QB
OUTPUT QC
OUTPUT QD
GND
1
2
3
4
5
6
7
14
13
12
11
10
9
8
VCC
OUTPUT QH
OUTPUT QG
OUTPUT QF
OUTPUT QE
CLEAR
CLOCK

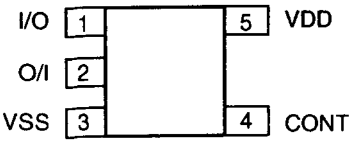
(TOP VIEW)

Truth Table

INPUTS		Function
CLEAR	CLOCK	
H	↑	Right Shift
⊔	*	Clear

* : Don't care.

16. IC21 on the Digital Process Board and IC6 on the Sync Board are using the Single Analog Switch/Multiplexer/ Demultiplexer IC YWTC4S66FR.
Description of this IC is as follows:

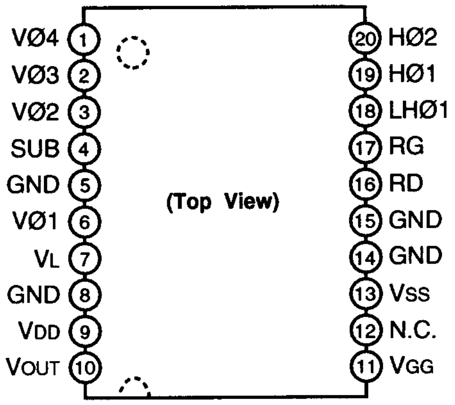

I/O
O/I
VSS
1
2
3
5
4
VDD
CONT

(TOP VIEW)

Truth Table

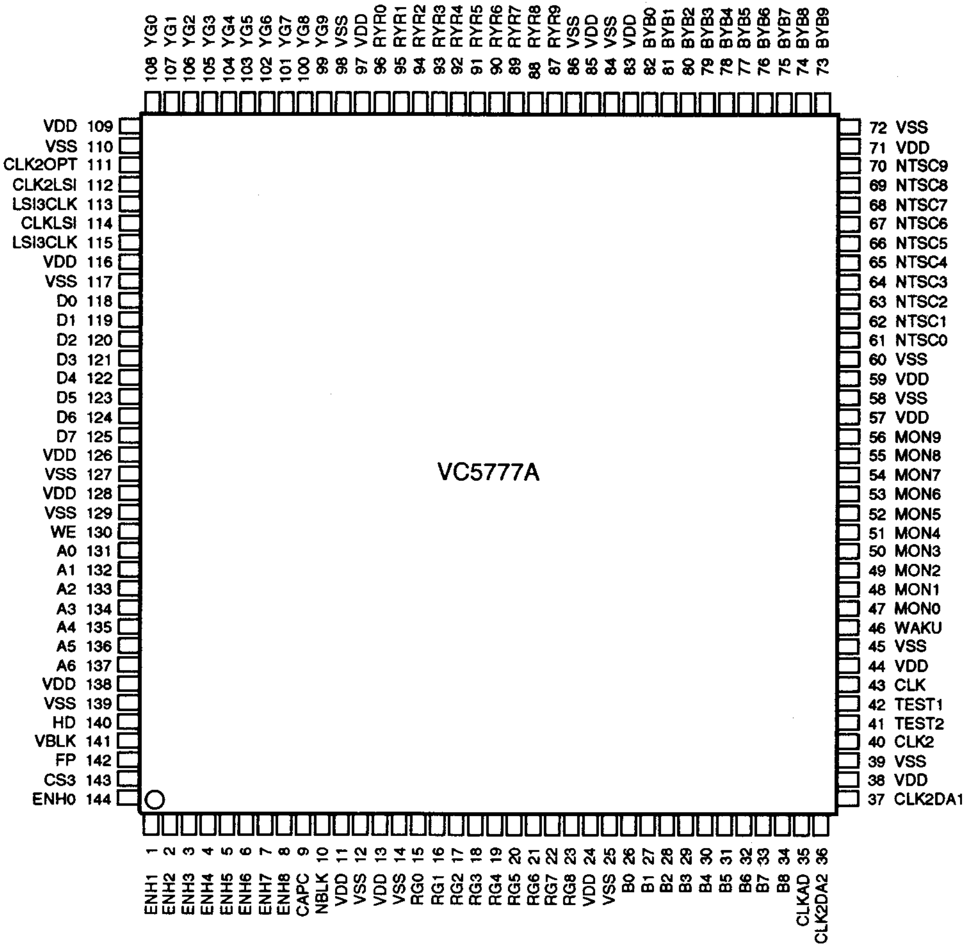
Input	Switch
Control	I/O – O/I
L	OFF
H	ON

17. IC101, IC201 and IC301 on the Sensor Board are using the CCD Image Sensor IC ICX038BLA.
Description of this IC is as follows:


VØ4 1
VØ3 2
VØ2 3
SUB 4
GND 5
VØ1 6
VL 7
GND 8
VDD 9
VOUT 10
20 HØ2
19 HØ1
18 LHØ1
17 RG
16 RD
15 GND
14 GND
13 Vss
12 N.C.
11 VGG
(Top View)

Pin	Name	I/O	Description
1	Vø4	I	Vertical Register Transfer Clock input terminal.
2	Vø3	I	Vertical Register Transfer Clock input terminal.
3	Vø2	I	Vertical Register Transfer Clock input terminal.
4	SUB	–	Board (Overflow Drain).
5	GND	–	Ground terminal.
6	Vø1	I	Vertical Register Transfer Clock input terminal.
7	VL	I	Bias supply terminal for protection transistor.
8	GND	–	Ground terminal.
9	VDD	–	Power supply terminal for Drain Output Amp.
10	VOUT	O	Signal output terminal.
11	VGG	–	Gate bias supply terminal for Output Amp.
12	N.C.	–	Non connection.
13	Vss	–	Power supply terminal for Source Output Amp.
14	GND	–	Ground terminal.
15	GND	–	Ground terminal.
16	RD	I	Reset Drain Bias input terminal.
17	RG	I	Reset Gate Clock input terminal.
18	LHø1	I	Transfer Clock input terminal for last stage of Horizontal register.
19	Hø1	I	Horizontal Register Transfer Clock input terminal.
20	Hø2	I	Horizontal Register Transfer Clock input terminal.

18. IC3 on the Digital Process Board is using the Gate Array Logic IC YWVC5777A.
Description of this IC is as follows:


VC5777A
108 YG0
107 YG1
106 YG2
105 YG3
104 YG4
103 YG5
102 YG6
101 YG7
100 YG8
99 YG9
98 VSS
97 VDD
96 RYR0
95 RYR1
94 RYR2
93 RYR3
92 RYR4
91 RYR5
90 RYR6
89 RYR7
88 RYR8
87 RYR9
86 VSS
85 VDD
84 VSS
83 VDD
82 BYB0
81 BYB1
80 BYB2
79 BYB3
78 BYB4
77 BYB5
76 BYB6
75 BYB7
74 BYB8
73 BYB9
VDD 109
VSS 110
CLK2OPT 111
CLK2LSI 112
LSI3CLK 113
CLKLSI 114
LSI3CLK 115
VDD 116
VSS 117
D0 118
D1 119
D2 120
D3 121
D4 122
D5 123
D6 124
D7 125
VDD 126
VSS 127
VDD 128
VSS 129
WE 130
A0 131
A1 132
A2 133
A3 134
A4 135
A5 136
A6 137
VDD 138
VSS 139
HD 140
VBLK 141
FP 142
CS3 143
ENH0 144
72 VSS
71 VDD
70 NTSC9
69 NTSC8
68 NTSC7
67 NTSC6
66 NTSC5
65 NTSC4
64 NTSC3
63 NTSC2
62 NTSC1
61 NTSC0
60 VSS
59 VDD
58 VSS
57 VDD
56 MON9
55 MON8
54 MON7
53 MON6
52 MON5
51 MON4
50 MON3
49 MON2
48 MON1
47 MON0
46 WAKU
45 VSS
44 VDD
43 CLK
42 TEST1
41 TEST2
40 CLK2
39 VSS
38 VDD
37 CLK2DA1
1 ENH1
2 ENH2
3 ENH3
4 ENH4
5 ENH5
6 ENH6
7 ENH7
8 ENH8
9 CAPC
10 NBLK
11 VDD
12 VSS
13 VDD
14 VSS
15 RG0
16 RG1
17 RG2
18 RG3
19 RG4
20 RG5
21 RG6
22 RG7
23 RG8
24 VDD
25 VSS
26 B0
27 B1
28 B2
29 B3
30 B4
31 B5
32 B6
33 B7
34 B8
35 CLKAD
36 CLK2DA2

(TOP VIEW)

Pin	Name	I/O	Description
1	ENH1	I	EN43 signal input terminals. (9-Bit)
2	ENH2	I	
3	ENH3	I	
4	ENH4	I	
5	ENH5	I	
6	ENH6	I	
7	ENH7	I	
8	ENH8	I	(MSB)
9	CAPC	I	CAPC signal input terminal.
10	NBLK	I	NBLK signal input terminal.
11	VDD	–	Power supply terminal for I/O.
12	VSS	–	Ground terminal for I/O.
13	VDD	–	Power supply terminal for Core.
14	VSS	–	Ground terminal for Core.

Pin	Name	I/O	Description
15	RG0	I	(LSB) RG23 signal input terminals. (9-Bit)
16	RG1	I	
17	RG2	I	
18	RG3	I	
19	RG4	I	
20	RG5	I	
21	RG6	I	
22	RG7	I	
23	RG8	I	(MSB)
24	VDD	–	Power supply terminal for I/O.
25	VSS	–	Ground terminal for I/O.
26	B0	I	(LSB) B23 signal input terminals. (9-Bit)
27	B1	I	
28	B2	I	

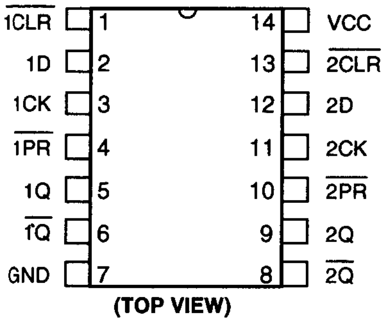
Pin	Name	I/O	Description
29	B3	I	B23 signal input terminals. (9-Bit)
30	B4	I	
31	B5	I	
32	B6	I	
33	B7	I	
34	B8	I	(MSB)
35	CLKAD	O	CLKAD Pulse output terminal.
36	CLK2DA2	O	CLK2DA2 Pulse output terminal.
37	CLK2DA1	O	CLK2DA1 Pulse output terminal.
38	VDD	–	Power supply terminal for I/O.
39	VSS	–	Ground terminal for I/O.
40	CLK2	O	CLK2 Pulse output terminal.
41	TEST2	I	Test terminal 2.
42	TEST1	I	Test terminal 1.
43	CLK	O	CLK Pulse output terminal.
44	VDD	–	Power supply terminal for I/O.
45	VSS	–	Ground terminal for I/O.
46	WAKU	O	WAKU signal output terminal.
47	MON0	O	(LSB) Monitor signal output terminals. (10-Bit)
48	MON1	O	
49	MON2	O	
50	MON3	O	
51	MON4	O	
52	MON5	O	
53	MON6	O	
54	MON7	O	
55	MON8	O	
56	MON9	O	(MSB)
57	VDD	–	Power supply terminal for I/O.
58	VSS	–	Ground terminal for I/O.
59	VDD	–	Power supply terminal for Core.
60	VSS	–	Ground terminal for Core.
61	NTSC0	O	(LSB) NTSC signal output terminals. (10-Bit)
62	NTSC1	O	
63	NTSC2	O	
64	NTSC3	O	
65	NTSC4	O	
66	NTSC5	O	
67	NTSC6	O	
68	NTSC7	O	
69	NTSC8	O	
70	NTSC9	O	(MSB)
71	VDD	–	Power supply terminal for I/O.
72	VSS	–	Ground terminal for I/O.
73	BYB9	O	(MSB) BYB signal output terminals. (10-Bit)
74	BYB8	O	
75	BYB7	O	
76	BYB6	O	
77	BYB5	O	
78	BYB4	O	

Pin	Name	I/O	Description
79	BYB3	O	BYB signal output terminals. (10-Bit)
80	BYB2	O	
81	BYB1	O	
82	BYB0	O	(LSB)
83	VDD	–	Power supply terminal for I/O.
84	VSS	–	Ground terminal for I/O.
85	VDD	–	Power supply terminal for Core.
86	VSS	–	Ground terminal for Core.
87	RYR9	O	(MSB) RYR signal output terminals. (10-Bit)
88	RYR8	O	
89	RYR7	O	
90	RYR6	O	
91	RYR5	O	
92	RYR4	O	
93	RYR3	O	
94	RYR2	O	
95	RYR1	O	
96	RYR0	O	(LSB)
97	VDD	–	Power supply terminal for I/O.
98	VSS	–	Ground terminal for I/O.
99	YG9	O	(MSB) YG signal output terminals. (10-Bit)
100	YG8	O	
101	YG7	O	
102	YG6	O	
103	YG5	O	
104	YG4	O	
105	YG3	O	
106	YG2	O	
107	YG1	O	
108	YG0	O	(LSB)
109	VDD	–	Power supply terminal for I/O.
110	VSS	–	Ground terminal for I/O.
111	CLK2OPT	O	CLK2OPT Pulse output terminal.
112	CLK2LSI	O	CLK2LSI Pulse output terminal.
113	LSI3CLK2	I	LSI3CLK2 Pulse input terminal.
114	CLKLSI	O	CLKLSI Pulse output terminal.
115	LSI3CLK	I	LSI3CLK Pulse input terminal.
116	VDD	–	Power supply terminal for I/O.
117	VSS	–	Ground terminal for I/O.
118	D0	I	(LSB) Data input terminals. (8-Bit)
119	D1	I	
120	D2	I	
121	D3	I	
122	D4	I	
123	D5	I	
124	D6	I	
125	D7	I	(MSB)
126	VDD	–	Power supply terminal for I/O.
127	VSS	–	Ground terminal for I/O.
128	VDD	–	Power supply terminal for Core.

Pin	Name	I/O	Description
129	VSS	–	Ground terminal for I/O.
130	WE	I	Write enable signal input terminal.
131	ADR0	I	(LSB)
132	ADR1	I	Address input terminals. (7-Bit)
133	ADR2	I	
134	ADR3	I	
135	ADR4	I	
136	ADR5	I	
137	ADR6	I	(MSB)
138	VDD	–	Power supply terminal for I/O.
139	VSS	–	Ground terminal for I/O.
140	HD	I	HD signal input terminal.
141	VBLK	I	VBLK signal input terminal.
142	FP	I	FP signal input terminal.
143	CS3	I	CS3 signal input terminal.
144	ENH0	I	(LSB) ENH43 signal input terminals. (9-Bit)

19. IC15 on the Digital Process Board is using the Dual D-FFs with Preset and Clear IC YWTC74AC74F.

Description of this IC is as follows:


$\overline{1CLR}$ 1
1D 2
1CK 3
$\overline{1PR}$ 4
1Q 5
$\overline{1Q}$ 6
GND 7
14 VCC
13 $\overline{2CLR}$
12 2D
11 2CK
10 $\overline{2PR}$
9 2Q
8 $\overline{2Q}$
(TOP VIEW)

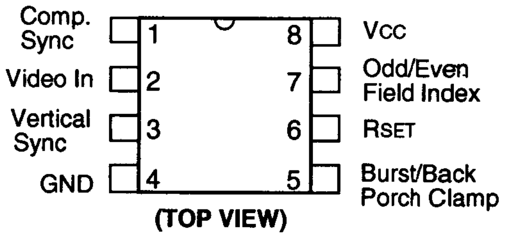
Truth Table

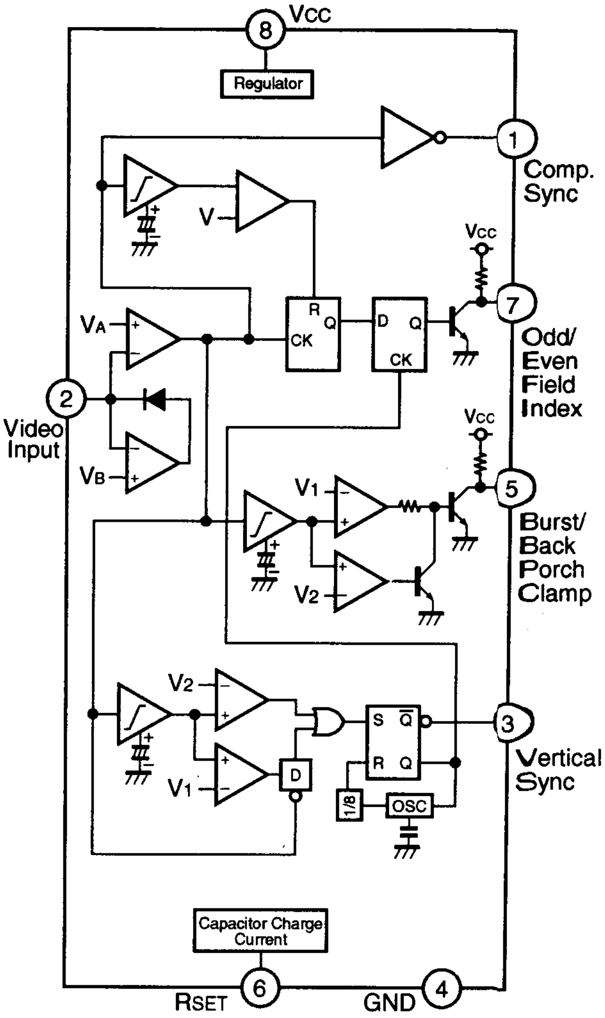
INPUTS				OUTPUTS		Function
$\overline{CLR}$	$\overline{PR}$	D	CK	Q	$\overline{Q}$	
L	H	*	*	L	H	Clear
H	L	*	*	H	L	Preset
L	L	*	*	H	H	——
H	H	L	↑	L	H	——
H	H	H	↑	H	L	——
H	H	*	↓	Qn	$\overline{Qn}$	No Change

* : Don't care.

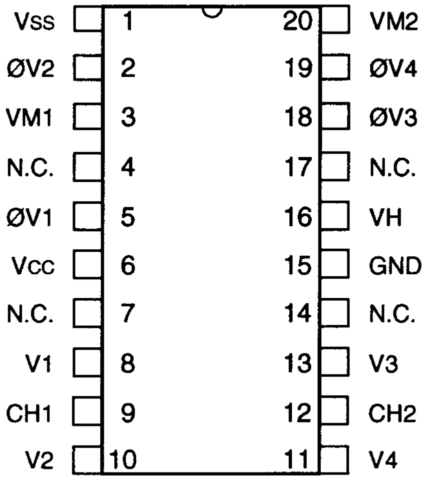
20. IC11 on the Sync Board is using the Sync Separator IC YWLM1881M.

Description of this IC is as follows:


Comp. Sync 1
Video In 2
Vertical Sync 3
GND 4
8 Vcc
7 Odd/Even Field Index
6 RSET
5 Burst/Back Porch Clamp
(TOP VIEW)

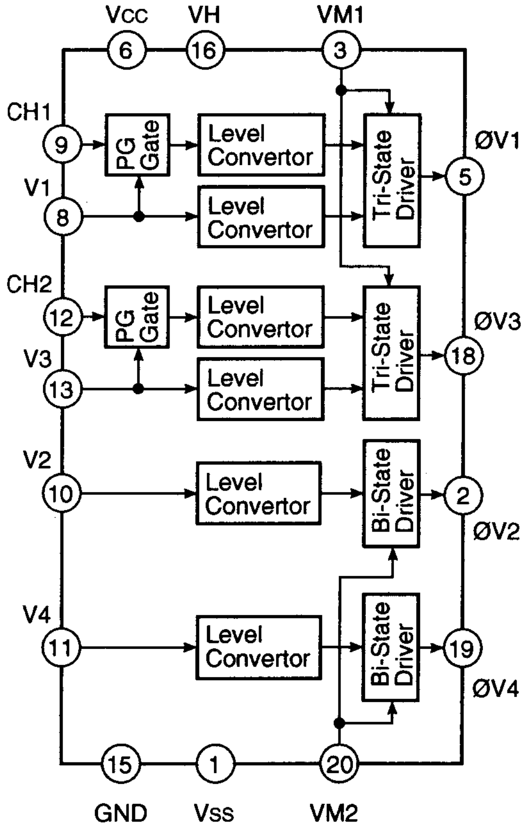

8
Vcc
Regulator
1
Comp. Sync
V
Vcc
7
Odd/Even Field Index
VA
R
Q
CK
D
Q
CK
2
Video Input
VB
Vcc
5
Burst/Back Porch Clamp
V1
V2
V2
S
$\overline{Q}$
R
Q
3
Vertical Sync
V1
D
1/8
OSC
Capacitor Charge Current
RSET
6
GND
4

21. IC2 on the Sensor Board is using the Vertical Driver IC YWUPD16502GS.
Description of this IC is as follows:

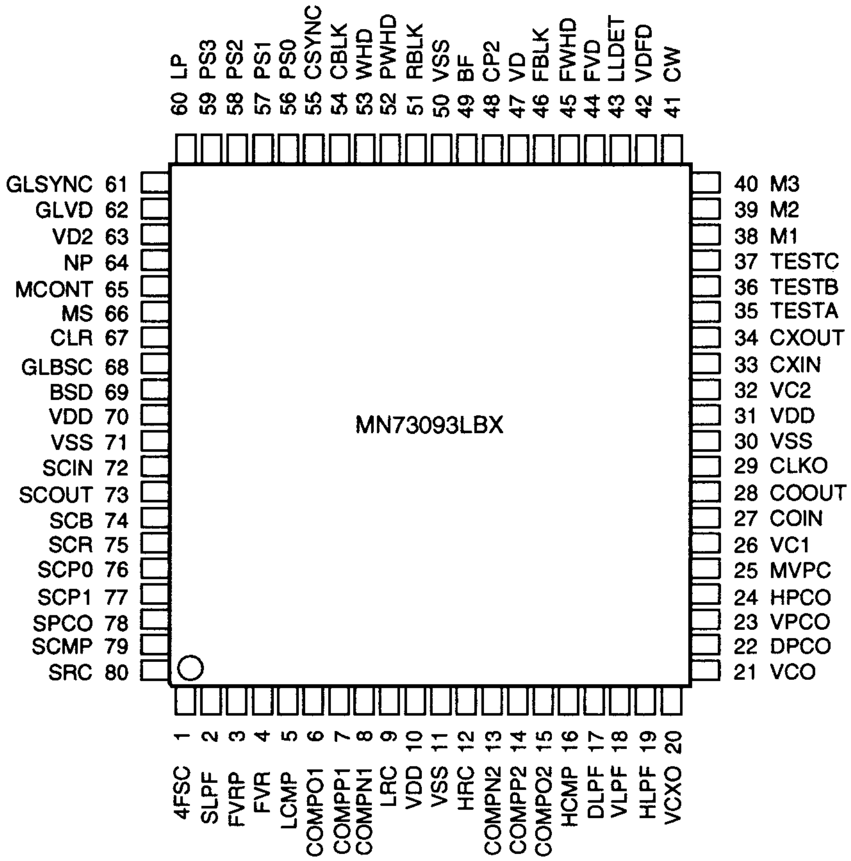

Vss
1
20
VM2
ØV2
2
19
ØV4
VM1
3
18
ØV3
N.C.
4
17
N.C.
ØV1
5
16
VH
Vcc
6
15
GND
N.C.
7
14
N.C.
V1
8
13
V3
CH1
9
12
CH2
V2
10
11
V4

(TOP VIEW)

Pin	Name	I/O	Description
1	VSS	–	Negative Voltage supply terminal.
2	ØV2	O	Bi-State output terminal 1.
3	VM1	–	Middle Voltage supply terminal for Tri-State Drivers.
4	N.C.	–	Non Connection.
5	ØV1	O	Tri-State input terminal 1.
6	Vcc	–	Power supply for input circuit section.
7	N.C.	–	Non Connection.
8	V1	I	Tri-State input terminal 1.
9	CH1	I	Photodiode Gate input terminal 1.
10	V2	I	Bi-State input terminal 1.
11	V4	I	Bi-State input terminal 2.
12	CH2	I	Photodiode Gate input terminal 2.
13	V3	I	Tri-State input terminal 2.
14	N.C.	–	Non Connection.
15	GND	–	Ground terminal.
16	VH	–	High Voltage supply terminal for Tri-State Drivers.
17	N.C.	–	Non Connection.
18	ØV3	O	Tri-State input terminal 2.
19	ØV4	O	Bi-State output terminal 2.
20	VM2	–	Middle Voltage supply terminal for Bi-State Drivers.


Vcc
VH
VM1
6
16
3
CH1
9
PG Gate
Level Convertor
Tri-State Driver
ØV1
5
V1
8
Level Convertor
CH2
12
PG Gate
Level Convertor
Tri-State Driver
ØV3
18
V3
13
Level Convertor
V2
10
Level Convertor
Bi-State Driver
2
ØV2
V4
11
Level Convertor
Bi-State Driver
19
ØV4
15
1
20
GND
Vss
VM2

22. IC3 on the Sync Board is using the Sync Generator IC MN73093LBX.
Description of this IC is as follows:


60 LP
59 PS3
58 PS2
57 PS1
56 PS0
55 CSYNC
54 CBLK
53 WHD
52 PWHD
51 RBLK
50 VSS
49 BF
48 CP2
47 VD
46 FBLK
45 FWHD
44 FVD
43 LLDET
42 VDFD
41 CW
GLSYNC 61
GLVD 62
VD2 63
NP 64
MCONT 65
MS 66
CLR 67
GLBSC 68
BSD 69
VDD 70
VSS 71
SCIN 72
SCOUT 73
SCB 74
SCR 75
SCP0 76
SCP1 77
SPCO 78
SCMP 79
SRC 80
MN73093LBX
40 M3
39 M2
38 M1
37 TESTC
36 TESTB
35 TESTA
34 CXOUT
33 CXIN
32 VC2
31 VDD
30 VSS
29 CLKO
28 COOUT
27 COIN
26 VC1
25 MVPC
24 HPCO
23 VPCO
22 DPCO
21 VCO
1 4FSC
2 SLPF
3 FVRP
4 FVR
5 LCMP
6 COMPO1
7 COMPP1
8 COMPN1
9 LRC
10 VDD
11 VSS
12 HRC
13 COMPN2
14 COMPP2
15 COMPO2
16 HCMP
17 DLPF
18 VLPF
19 HLPF
20 VCXO

(TOP VIEW)

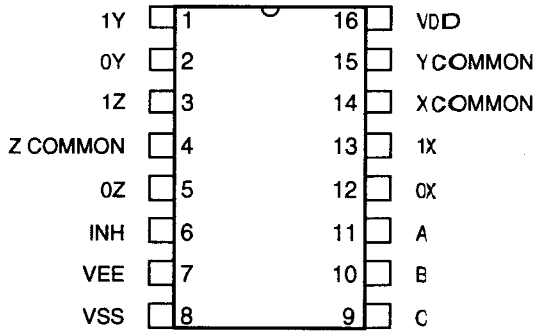
Pin	Name	I/O	Description
1	4FSC	O	4FSC Signal output terminal.
2	SLPF	I	SLPF signal input terminal.
3	FVRP	I	FVRP signal input terminal.
4	FVR	I	FVR signal input terminal.
5	LCMP	I	LCMP signal input terminal.
6	COMPO1	O	COMPO1 signal output terminal.
7	COMPP1	O	COMPP1 signal output terminal.
8	COMPN1	O	COMPN1 signal output terminal.
9	LRC	O	LRC signal output terminal.
10	VDD	–	+5V supply terminal.
11	VSS	–	Ground terminal.
12	HRC	O	HRC signal output terminal.
13	COMPN2	O	COMPN2 signal output terminal.
14	COMPP2	O	COMPP2 signal output terminal.
15	COMPO2	O	COMPO2 signal output terminal.
16	HCMP	I	HCMP signal input terminal.
17	DLPF	I	DLPF signal input terminal.
18	VLPF	I	VLPF signal input terminal.
19	HLPF	I	HLPF signal input terminal.
20	VCXO	O	VCXO signal output terminal.
21	VCO	O	VCO signal output terminal.
22	DPCO	O	DPCO signal output terminal.

Pin	Name	I/O	Description
23	VPCO	O	VPCO signal input terminal.
24	HPCO	O	HPCO signal input terminal.
25	MVPC	I	MVPC signal input terminal.
26	VC1	O	VC1 signal input terminal.
27	COIN	I	COIN signal input terminal.
28	COOUT	O	COOUT signal output terminal.
29	CLKO	O	CLKO signal output terminal.
30	VSS	–	Ground terminal.
31	VDD	–	+5V supply terminal.
32	VC2	O	VC2 signal input terminal.
33	CXIN	I	CXIN signal input terminal.
34	CXOUT	O	CXOUT signal output terminal.
35	TESTA	I	TESTA signal input terminal.
36	TESTB	I	TESTB signal input terminal.
37	TESTC	I	TESTC signal input terminal.
38	M1	I/O	M1 signal in/out terminal.
39	M2	I/O	M2 signal in/out terminal.
40	M3	I/O	M3 signal in/out terminal.
41	CW	I	CW signal input terminal.
42	VDFD	I	VDFD signal input terminal.
43	LLDET	I	LLDET signal input terminal.
44	FVD	O	FVD signal output terminal.
45	FWHD	O	FWHD signal output terminal.
46	FBLK	O	FBLK signal output terminal.
47	VD	O	VD signal output terminal.
48	CP2	O	CP2 signal output terminal.
49	BF	O	BF signal output terminal.
50	VSS	–	Ground terminal.
51	RBLK	I	RBLK signal input terminal.
52	PWHD	I	PWHD signal input terminal.
53	WHD	O	WHD signal output terminal.
54	CBLK	O	CBLK signal output terminal.
55	CSYNC	O	CSYNC signal output terminal.
56	PS0	I	PS0 signal output terminal.
57	PS1	I	PS1 signal output terminal.
58	PS2	I	PS2 signal output terminal.
59	PS3	I	PS3 signal output terminal.
60	LP	I	LP signal output terminal.
61	GLSYNC	I	GLSYNC signal output terminal.
62	GLVD	I	GLVD signal input terminal.
63	VD2	I	VD2 signal input terminal.

Pin	Name	I/O	Description
64	NP	I	NTSC/PAL switching signal input terminal. H = NTSC L = PAL
65	MCONT	I	MCONT signal input terminal.
66	MS	I	MS signal input terminal.
67	CLR	I	CLR signal output terminal.
68	GLBSC	I	GLBSC signal output terminal.
69	BSD	I	BSD signal output terminal.
70	VDD	–	+5V supply terminal.
71	VSS	–	Ground terminal.
72	SCIN	I	SCIN signal input terminal.
73	SCOUT	O	SCOUT signal output terminal.
74	SCBO	O	SCBO signal output terminal.
75	SCRO	O	SCRO signal output terminal.
76	SCP0	I	SCP0 signal input terminal.
77	SCP1	I	SCP1 signal input terminal.
78	SPCO	O	SPCO signal output terminal.
79	SCMP	I	SCMP signal output terminal.
80	SRC	O	SRC signal output terminal.

23. IC5 on the Preamp/Encoder Board, IC102, IC202 and IC302 on the Preprocess Board, IC1 on the Rear Board are using the Triple 2-ch Analog Multiplexer/Demultiplexer IC YWUPD4053BG.

Description of this IC is as follows:



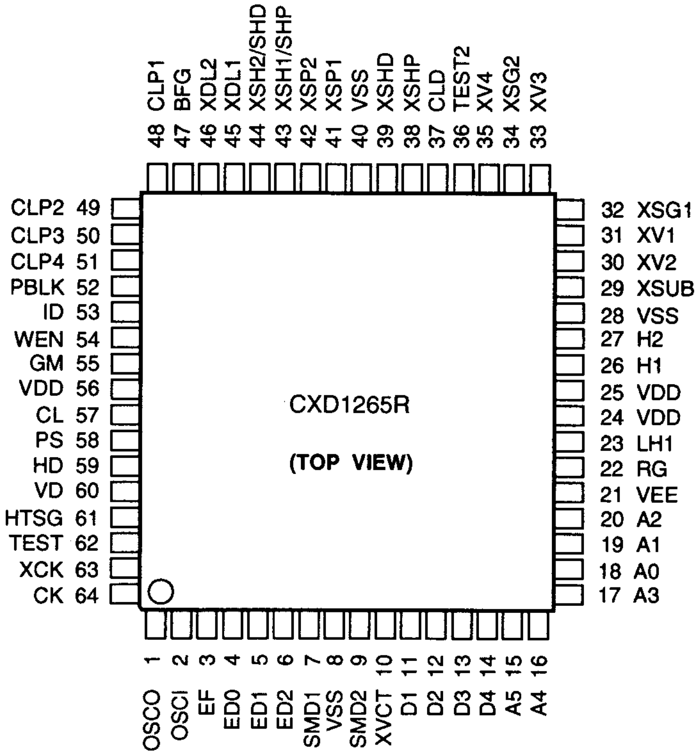
(TOP VIEW)

Truth Table

INHIBIT	C	B	A	X COMMON	Y COMMON	Z COMMON
L	L	L	L	0X	0Y	0Z
L	L	L	H	1X	0Y	0Z
L	L	H	L	0X	1Y	0Z
L	L	H	H	1X	1Y	0Z
L	H	L	L	0X	0Y	1Z
L	H	L	H	1X	0Y	1Z
L	H	H	L	0X	1Y	1Z
L	H	H	H	1X	1Y	1Z
H	*	*	*	NONE	NONE	NONE

* : Don't care.

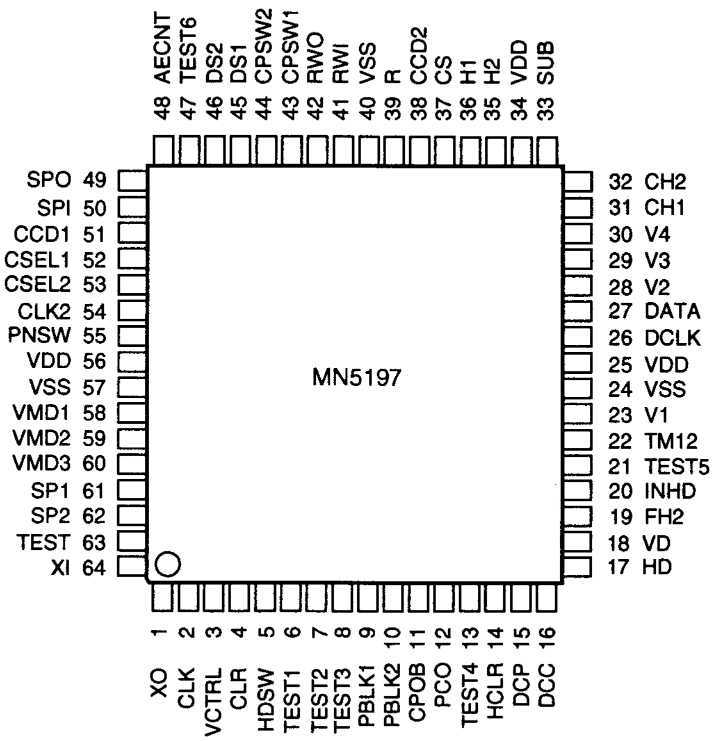
24. IC9 on the Drive Board is using the Timing Generator IC YWCXD1265R.
Description of this IC is as follows:


48 CLP1
47 BFG
46 XDL2
45 XDL1
44 XSH2/SHD
43 XSH1/SHP
42 XSP2
41 XSP1
40 VSS
39 XSHD
38 XSHP
37 CLD
36 TEST2
35 XV4
34 XSG2
33 XV3
CLP2 49
CLP3 50
CLP4 51
PBLK 52
ID 53
WEN 54
GM 55
VDD 56
CL 57
PS 58
HD 59
VD 60
HTSG 61
TEST 62
XCK 63
CK 64
32 XSG1
31 XV1
30 XV2
29 XSUB
28 VSS
27 H2
26 H1
25 VDD
24 VDD
23 LH1
22 RG
21 VEE
20 A2
19 A1
18 A0
17 A3
CXD1265R
(TOP VIEW)
1 OSCO
2 OSCI
3 EF
4 ED0
5 ED1
6 ED2
7 SMD1
8 VSS
9 SMD2
10 XVCT
11 D1
12 D2
13 D3
14 D4
15 A5
16 A4

Pin	Name	I/O	Description
1	OSCO	O	Oscillation Inverter output terminal.
2	OSCI	I	Oscillation Inverter input terminal.
3	EF	I	Error Correction System Selecting signal input terminal. H = External ROM L = Serial signal from microprocessor
4	ED0	I	Shutter Speed Set signal input terminal. Strobe input terminal when Serial mode.
5	ED1	I	Shutter Speed Set signal input terminal. Clock input terminal when Serial mode.
6	ED2	I	Shutter Speed Set signal input terminal. Data input terminal when Serial mode.
7	SMD1	I	Shutter Mode Set signal input terminal.
8	VSS	–	Ground terminal.
9	SMD2	I	Shutter Mode Set signal input terminal.
10	XVCT	O	Power Control signal output terminal for external ROM.
11	D1	I	Data input terminal when using external ROM. Not using external ROM; L = without Error Correction H = with Error Correction
12	D2	I	Data input terminal when using external ROM. Not using external ROM; L = Color H = Black and White
13	D3	I	Data input terminal when using external ROM. Not using external ROM; fixed at Low.
14	D4	I	Data input terminal when using external ROM. Not using external ROM; L = NTSC H = PAL

Pin	Name	I/O	Description
15	A5	O	Address output terminal for external ROM.
16	A4	O	Address output terminal for external ROM.
17	A3	O	Address output terminal for external ROM.
18	A0	O	Address output terminal for external ROM.
19	A0	O	Address output terminal for external ROM.
20	A0	O	Address output terminal for external ROM.
21	VEE	–	Ground terminal.
22	RG	O	Reset Gate signal output terminal.
23	LH1	O	Clock output terminal for last stage of CCD Horizontal Register.
24	VDD	–	Power supply terminal.
25	VDD	–	Power supply terminal for H1 and H2 circuits.
26	H1	O	Clock output terminal for CCD Horizontal Register Drive.
27	H2	O	Clock output terminal for CCD Horizontal Register Drive.
28	Vss	–	Ground terminal for H1 and H2 circuit.
29	XSUB	O	CCD Charge Clear Pulse output terminal.
30	XV2	O	Clock output terminal for CCD Vertical Register Drive.
31	XV1	O	Clock output terminal for CCD Vertical Register Drive.
32	XSG1	O	CCD Sensor Charge Read Out Pulse output terminal.
33	XV3	O	Clock output terminal for CCD Vertical Register Drive.
34	XSG2	O	CCD Sensor Charge Read Out Pulse output terminal.
35	XV4	O	Clock output terminal for CCD Vertical Register Drive.
36	TEST2	I	Test input terminal; Normally fixed at Low.
37	CLD	O	4fsc Clock output terminal.
38	XSHP	O	Pre-Charge Level Sample and Hold Pulse output terminal.
39	XSHD	O	Data Sample and Hold Pulse output terminal.
40	Vss	–	Ground terminal.
41	XSP1	O	Chroma Separation Sample and Hold Pulse output terminal. Stop at Black and White mode.
42	XSP2	O	Chroma Separation Sample and Hold Pulse output terminal. Stop at Black and White mode.
43	XSH1/ SHP	O	Switching Sample and Hold Pulse/Pre-Charge Level Sample and Hold Pulse (Black and White mode) output terminal.
44	XSH2/ SHP	O	Switching Sample and Hold Pulse/Pre-Charge Level Sample and Hold Pulse (Black and White mode) output terminal.
45	XDL1	O	Clock output terminal for Delay Line. Stop at Black and White mode.
46	XDL2	O	Clock output terminal for Delay Line. Stop at Black and White mode.
47	BFG	O	Encoder Chroma Modulator Pulse output terminal. Error Position Pointer Pulse when GM = High. Stop at Black and White mode.
48	CLP1	O	Clamp signal output terminal.
49	CLP2	I/O	Clamp signal output terminal. Standby Mode Switching signal input terminal when GM = High.
50	CLP3	I/O	Clamp signal output terminal. Standby Mode Switching signal input terminal when GM = High.
51	CLP4	O	Clamp signal output terminal.
52	PBLK	O	Pre-Blanking Pulse output terminal.
53	ID	O	Line Identification signal output terminal.
54	WEN	O	Write Enable signal output terminal (only when slow speed shutter).
55	GM	I	H = Digital Signal Process L = Analog Signal Process
56	VDD	–	Power supply terminal.
57	CL	O	4fsc Clock output terminal.
58	PS	I	Electronic Shutter Speed mode switching signal input terminal. H = Parallel Input L = Serial Input
59	HD	I	Horizontal Sync signal input terminal.
60	VD	I	Vertical Sync signal input terminal.
61	HTSG	I	XSG1, 2 Control signal input terminal. H = XSG1, 2 generate L = XSG1, 2 stop
62	TEST	I	Test signal input terminal.
63	XCK	O	8fsc Clock output terminal.
64	CK	I	8fsc Clock input terminal.

25. IC3 on the Drive Board is using the 1/3" 510/670/768H CCD Driver with Phase Comparator IC MN5197.
Description of this IC is as follows:


MN5197
48 AECNT
47 TEST6
46 DS2
45 DS1
44 CPSW2
43 CPSW1
42 RWO
41 RWI
40 VSS
39 R
38 CCD2
37 CS
36 H1
35 H2
34 VDD
33 SUB
SPO 49
SPI 50
CCD1 51
CSEL1 52
CSEL2 53
CLK2 54
PNSW 55
VDD 56
VSS 57
VMD1 58
VMD2 59
VMD3 60
SP1 61
SP2 62
TEST 63
XI 64
32 CH2
31 CH1
30 V4
29 V3
28 V2
27 DATA
26 DCLK
25 VDD
24 VSS
23 V1
22 TM12
21 TEST5
20 INHD
19 FH2
18 VD
17 HD
1 XO
2 CLK
3 VCTRL
4 CLR
5 HDSW
6 TEST1
7 TEST2
8 TEST3
9 PBLK1
10 PBLK2
11 CPOB
12 PCO
13 TEST4
14 HCLR
15 DCP
16 DCC

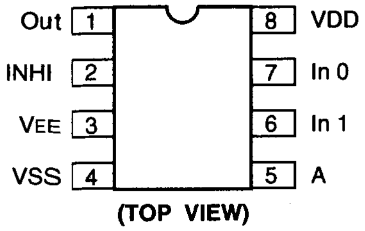
(TOP VIEW)

Pin	Name	I/O	Description
1	XO	O	Oscillator output terminal.
2	CLK	O	CLK signal output terminal.
3	VCTRL	I	VCTRL signal input terminal.
4	CLR	I	CLR signal input terminal.
5	HDSW	I	HDSW signal input terminal.
6	TEST1	I	Test terminal.
7	TEST2	I	Test terminal.
8	TEST3	I	Test terminal.
9	PBLK1	O	PBLK1 signal output terminal.
10	PBLK2	O	PBLK2 signal output terminal.
11	CPOB	O	CPOB signal output terminal.
12	PCO	O	PCO signal output terminal.
13	TEST4	I	Test terminal.
14	HCLR	O	HCLR signal output terminal.
15	DCP	O	DCP signal output terminal.
16	DCC	O	DCC signal output terminal.

Pin	Name	I/O	Description
17	HD	I	HD signal input terminal.
18	VD	I	VD signal input terminal.
19	FH2	O	FH2 signal output terminal.
20	INHD	O	INHD signal output terminal.
21	TEST5	I	Test terminal.
22	TM12	I	TM12 signal input terminal.
23	V1	O	V1 signal output terminal.
24	VSS	–	Ground terminal.
25	VDD	–	Power supply terminal
26	DCLK	I	DCLK signal input terminal.
27	DATA	I	DATA input terminal.
28	V2	O	V2 signal output terminal.
29	V3	O	V3 signal output terminal.
30	V4	O	V4 signal output terminal.
31	CH1	O	CH1 signal output terminal.
32	CH2	O	CH2 signal output terminal.

Pin	Name	I/O	Description
33	SUB	O	SUB signal output terminal.
34	VDD	–	Power supply terminal.
35	H1	O	H1 signal output terminal.
36	H2	O	H2 signal output terminal.
37	CS	I	CS signal input terminal.
38	CCD2	I	CCD2 signal input terminal.
39	R	O	R signal output terminal.
40	VSS	–	Ground terminal.
41	RWI	I	RWI signal input terminal.
42	RWO	O	RWO signal output terminal.
43	CPSW1	I	CPSW1 signal input terminal.
44	CPSW2	I	CPSW2 signal input terminal.
45	DS1	O	DS1 signal output terminal.
46	DS2	O	DS2 signal output terminal.
47	TEST6	I	Test terminal.
48	AECNT	I	AECNT signal input terminal.
49	SPO	O	SPO signal output terminal.
50	SPI	I	SPI signal input terminal.
51	CCD1	I	CCD1 signal input terminal.
52	CSEL1	I	CSEL1 signal input terminal.
53	CSEL2	I	CSEL2 signal input terminal.
54	CLK2	O	CLK2 signal output terminal.
55	PNSW	I	PNSW signal input terminal.
56	VDD	–	Power supply terminal.
57	VSS	–	Ground terminal.
58	VMD1	I	VMD1 signal input terminal.
59	VMD2	I	VMD2 signal input terminal.
60	VMD3	I	VMD3 signal input terminal.
61	SP1	O	SP1 signal output terminal.
62	SP2	O	SP2 signal output terminal.
63	TEST	I	Test terminal.
64	XI	I	Oscillator input terminal.

26. IC11 on the Preamp/Encoder Board, IC7, IC104, IC105, IC204, IC205, IC304 and IC305 on the Preprocess Board are using the Single Analog Multiplexer/Demultiplexer IC YWTC4W53FL.
Description of this IC is as follows:


Out 1
INHI 2
VEE 3
VSS 4
8 VDD
7 In 0
6 In 1
5 A

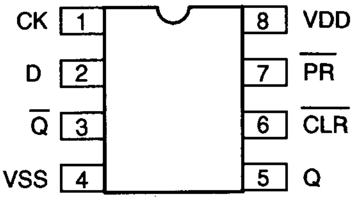
(TOP VIEW)

Truth Table

INPUTS		OUT
INHI	A	
L	L	IN 0
L	H	IN 1
H	*	None

*: Don't Care.

27. IC18 on the Drive Board is using the Single D-FF with Preset and Clear IC YWTC7W74F.
Description of this IC is as follows:


CK 1
D 2
$\overline{Q}$ 3
VSS 4
8 VDD
7 $\overline{PR}$
6 $\overline{CLR}$
5 Q

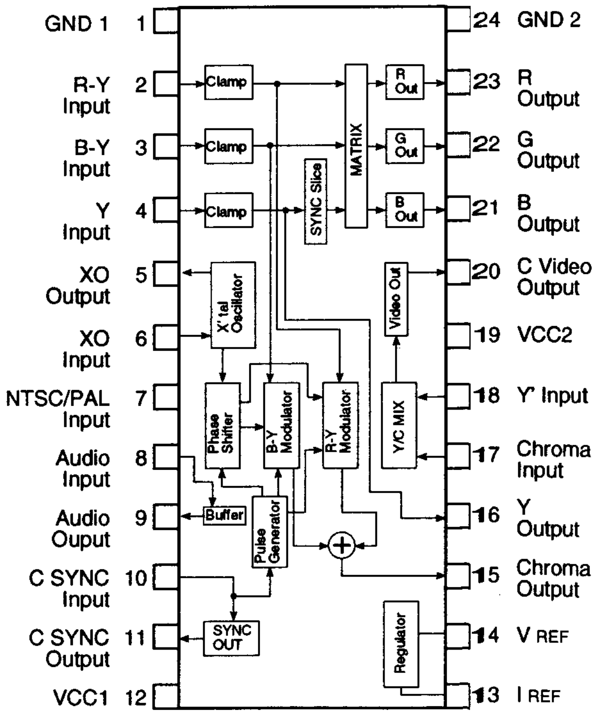
(TOP VIEW)

Truth Table

INPUTS				OUTPUTS		Function
$\overline{CLR}$	$\overline{PR}$	D	CK	Q	$\overline{Q}$	
L	H	*	*	L	H	Clear
H	L	*	*	H	L	Preset
L	L	*	*	H	H	—
H	H	L	↑	L	H	—
H	H	H	↑	H	L	—
H	H	*	↓	Qn	$\overline{Qn}$	No Change

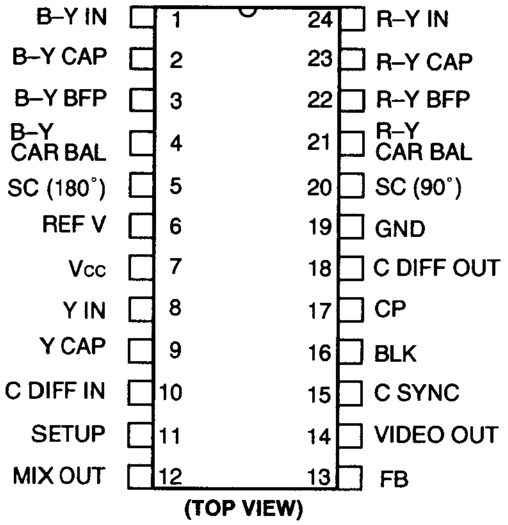
* : Don't care.

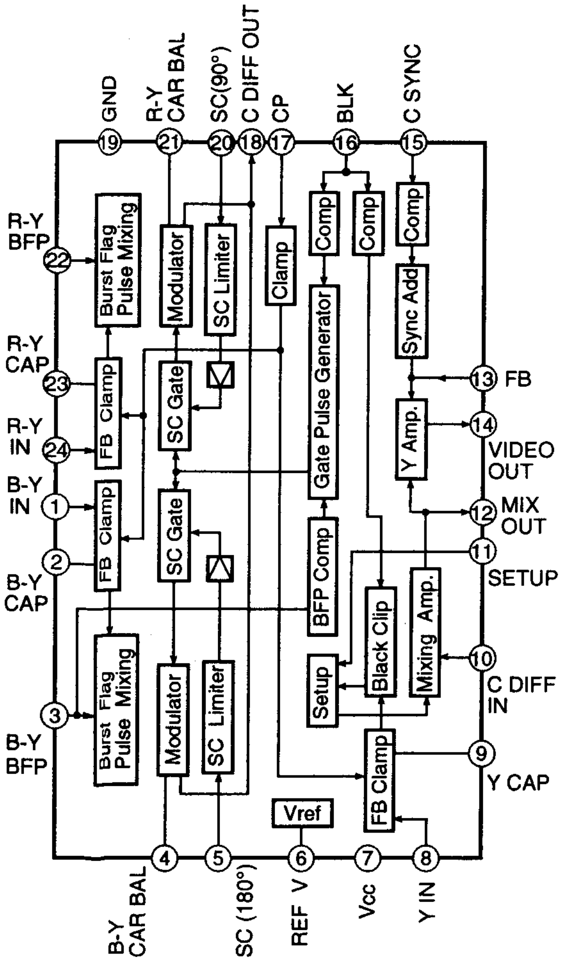
28. IC6 on the Encoder Board is using the Video Encoder IC YWCXA1229M.
Description of this IC is as follows:


GND 1 1
R-Y Input 2
B-Y Input 3
Y Input 4
XO Output 5
XO Input 6
NTSC/PAL Input 7
Audio Input 8
Audio Ouput 9
C SYNC Input 10
C SYNC Output 11
VCC1 12
24 GND 2
23 R Output
22 G Output
21 B Output
20 C Video Output
19 VCC2
18 Y' Input
17 Chroma Input
16 Y Output
15 Chroma Output
14 V REF
13 I REF
Clamp
Clamp
Clamp
SYNC Slice
MATRIX
R Out
G Out
B Out
X'tal Oscillator
Video Out
Phase Shifter
B-Y Modulator
R-Y Modulator
Y/C MIX
Buffer
Pulse Generator
SYNC OUT
Regulator

(TOP VIEW)

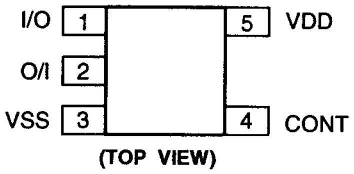
29. IC3 on the Preamp/Encoder Board is using the Chroma Difference Signal Encoder IC YWM51272FP.
Description of this IC is as follows:


B–Y IN 1
B–Y CAP 2
B–Y BFP 3
B–Y CAR BAL 4
SC (180°) 5
REF V 6
Vcc 7
Y IN 8
Y CAP 9
C DIFF IN 10
SETUP 11
MIX OUT 12
24 R–Y IN
23 R–Y CAP
22 R–Y BFP
21 R–Y CAR BAL
20 SC (90°)
19 GND
18 C DIFF OUT
17 CP
16 BLK
15 C SYNC
14 VIDEO OUT
13 FB
(TOP VIEW)


GND 19
R-Y CAR BAL 21
SC(90°) 20
C DIFF OUT 18
CP 17
BLK 16
C SYNC 15
R-Y BFP 22
R-Y CAP 23
R-Y IN 24
B-Y IN 1
2 B-Y CAP
3 B-Y BFP
Burst Flag Pulse Mixing
Modulator
SC Limiter
Clamp
Comp
Comp
Comp
Sync Add
FB Clamp
SC Gate
Gate Pulse Generator
Y Amp.
FB Clamp
SC Gate
BFP Comp
Black Clip
Mixing Amp.
Setup
Burst Flag Pulse Mixing
Modulator
SC Limiter
FB Clamp
Vref
13 FB
14 VIDEO OUT
12 MIX OUT
11 SETUP
10 C DIFF IN
9 Y CAP
4 B-Y CAR BAL
5 SC (180°)
6 REF V
7 Vcc
8 Y IN

Pin	Name	I/O	Description
1	B–Y IN	I	B–Y signal input terminal.
2	B–Y CAP	–	B–Y Clamp Capacitor connecting terminal.
3	B–Y BFP	I	B–Y Burst Flag Pulse input terminal.
4	B–Y CAR BAL	I	B–Y Carrier Balance adjusting terminal.
5	SC(180°)	I	Subcarrier (180°) input terminal.
6	REF V	–	Reference Voltage terminal.
7	VCC	–	+5V Supply terminal.
8	Y IN	I	Y signal input terminal.
9	Y CAP	–	Y signal Clamp Capacitor connecting terminal.
10	C DIFF IN	I	Chroma Difference signal output terminal.
11	SETUP	I	Setup Level input terminal.
12	MIX OUT	O	Mixing Amp. signal output terminal.
13	FB	I	Video Amp. Feedback terminal.
14	VIDEO OUT	O	Video signal output terminal.
15	C SYNC	I	Composite Sync signal input terminal.
16	BLK	I	Blanking signal input terminal.
17	CP	I	Clamp Pulse input terminal.
18	C DIFF OUT	O	Chroma Difference signal output terminal.
19	GND	–	Ground terminal.
20	SC(90°)	I	Subcarrier (90°) input terminal.
21	R–Y CAR BAL	I	R–Y Carrier Balance adjusting terminal.
22	R–Y BFP	I	R–Y Burst Flag Pulse input terminal.
23	R–Y CAP	–	R–Y signal Clamp Capactor connecting terminal.
24	R–Y IN	I	R–Y signal input terminal

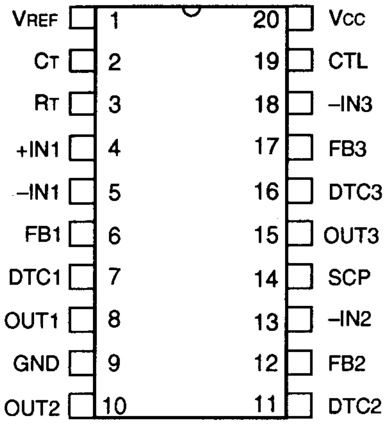
30. IC5 and IC6 on the Mother Board are using the Single Analog Switch/Multiplexer/Demultiplexer IC TC4S66FR.
Description of this IC is as follows:


I/O 1
O/I 2
VSS 3
5 VDD
4 CONT
(TOP VIEW)

Truth Table

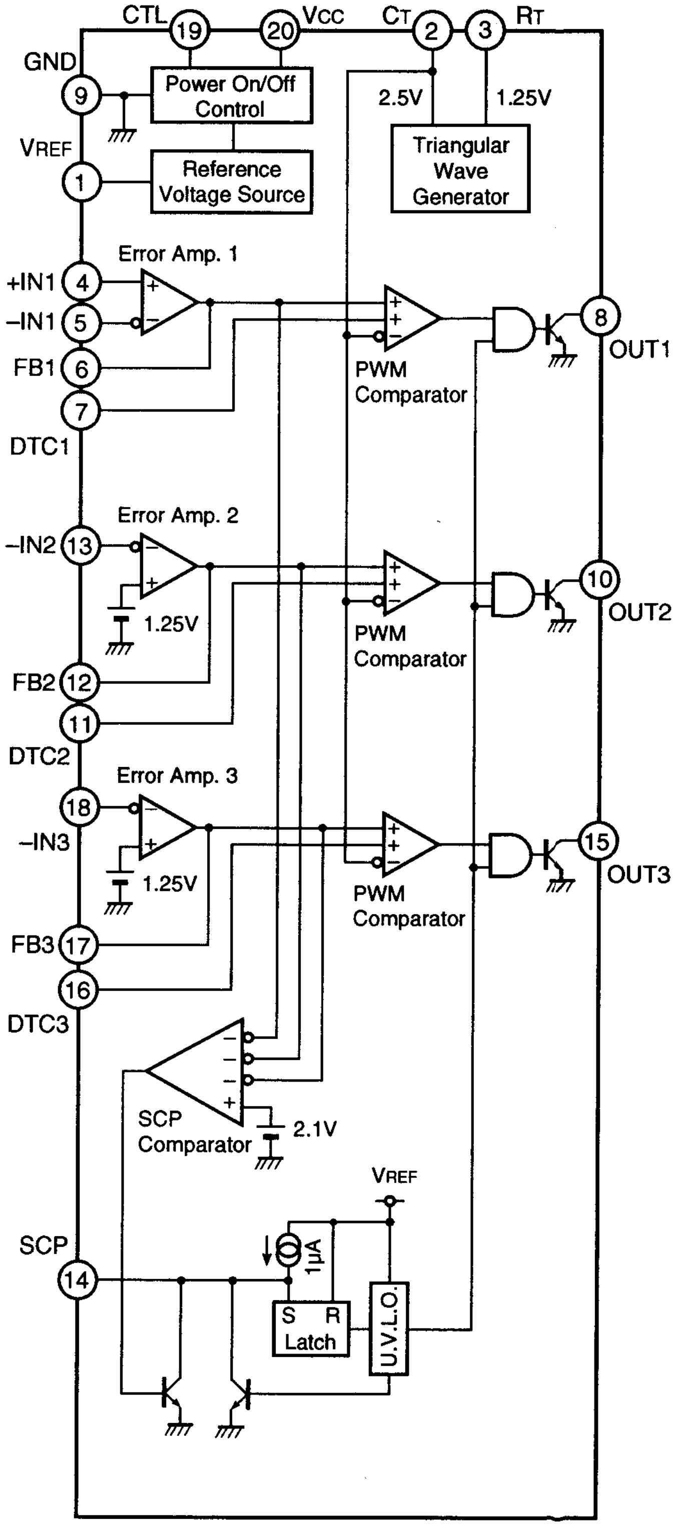
Input Control	Switch I/O — O/I
L	OFF
H	ON

31. IC1 and IC2 on the Power Board is using the Switching Regulator IC YWMB3782PF.
Description of this IC is as follows.


VREF 1
CT 2
RT 3
+IN1 4
-IN1 5
FB1 6
DTC1 7
OUT1 8
GND 9
OUT2 10
20 VCC
19 CTL
18 -IN3
17 FB3
16 DTC3
15 OUT3
14 SCP
13 -IN2
12 FB2
11 DTC2

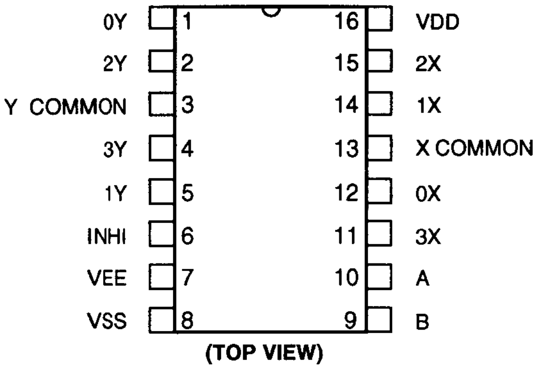
(TOP VIEW)

Pin	Name	I/O	Description
1	VREF	O	Reference Voltage output terminal (2.50V typical).
2	CT	–	Timing capacitor connecting terminal.
3	RT	–	Timing resistor connecting terminal.
4	+IN1	I	Non-invereting input terminal for Error Amp. 1.
5	–IN1	I	Invereting input terminal for Error Amp. 1.
6	FB1	–	Feedback terminal for Error Amp. 1.
7	DTC1	I	Dead Time Control 1 signal input terminal.
8	OUT1	O	Open Collector output terminal 1 (50mA maximum).
9	GND	–	Ground terminal.
10	OUT2	O	Open Collector output terminal 2 (50mA maximum).
11	DTC2	I	Dead Time Control 2 signal input terminal.
12	FB2	–	Feedback terminal for Error Amp. 2.
13	–IN2	I	Invereting input terminal for Error Amp. 2.
14	SCP	–	Short Circuit Protection terminal.
15	OUT3	O	Open Collector output terminal 3 (50mA maximum).
16	DTC3	I	Dead Time Control 3 signal input terminal.
17	FB3	–	Feedback terminal for Error Amp. 3.
18	–IN3	I	Invereting input terminal for Error Amp. 3.
19	CTL	I	Power Control terminal.
20	Vcc	–	Power Supply terminal.


CTL 19
20 VCC
CT 2
3 RT
GND 9
VREF 1
Power On/Off Control
Reference Voltage Source
2.5V
1.25V
Triangular Wave Generator
Error Amp. 1
+IN1 4
-IN1 5
FB1 6
7 DTC1
PWM Comparator
8 OUT1
Error Amp. 2
-IN2 13
1.25V
FB2 12
11 DTC2
10 OUT2
Error Amp. 3
18 -IN3
1.25V
FB3 17
16 DTC3
15 OUT3
SCP Comparator
2.1V
VREF
SCP 14
1μA
S R Latch
U.V.L.O.

32. IC8 on the Preamp/Encoder Board is using the Dual 4-ch Analog Multiplexers/Demultiplexers IC YWUPD4052 BG.

Description of this IC is as follows:


0Y 1
2Y 2
Y COMMON 3
3Y 4
1Y 5
INHI 6
VEE 7
VSS 8
16 VDD
15 2X
14 1X
13 X COMMON
12 0X
11 3X
10 A
9 B
(TOP VIEW)

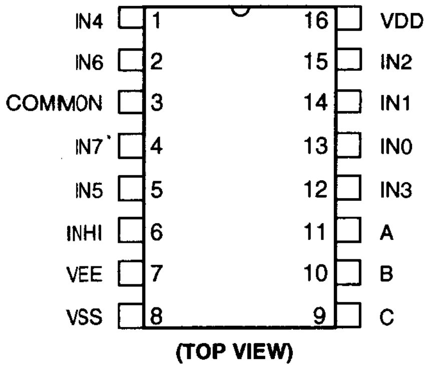
Truth Table

INHIBIT	B	A	X COMMON	Y COMMON
L	L	L	0X	0Y
L	L	H	1X	1Y
L	H	L	2X	2Y
L	H	H	3X	3Y
H	*	*	NONE	NONE

* : Don't care.

33. IC1 on the Mother Board is using the Single 8-ch Analog Multiplexer/Demultiplexer IC YWUPD4051BG.

Description of this IC is as follows:


IN4 1
IN6 2
COMMON 3
IN7 4
IN5 5
INHI 6
VEE 7
VSS 8
16 VDD
15 IN2
14 IN1
13 IN0
12 IN3
11 A
10 B
9 C
(TOP VIEW)

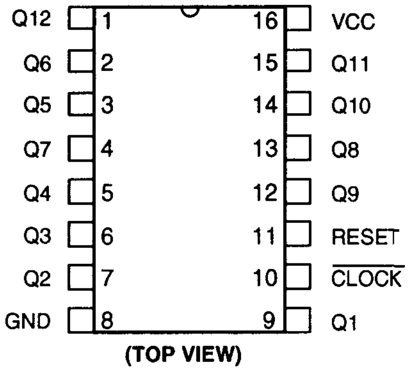
Truth Table

INHIBIT	C	B	A	COMMON
L	L	L	L	IN0
L	L	L	H	IN1
L	L	H	L	IN2
L	L	H	H	IN3
L	H	L	L	IN4
L	H	L	H	IN5
L	H	H	L	IN6
L	H	H	H	IN7
H	*	*	*	NONE

* : Don't care.

34. IC9 on the Mother Board is using the 12-stage Binary Ripple Counter IC MC74HC4040F.

Description of this IC is as follows:


Q12 1
Q6 2
Q5 3
Q7 4
Q4 5
Q3 6
Q2 7
GND 8
16 VCC
15 Q11
14 Q10
13 Q8
12 Q9
11 RESET
10 $\overline{CLOCK}$
9 Q1
(TOP VIEW)

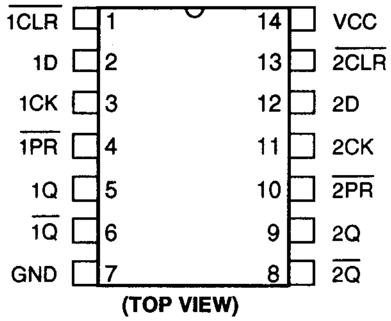
Truth Table

$\overline{CLOCK}$	RESET	Qn OUTPUT
*	H	L
↑	L	Don't Count
↓	L	Binary Count

* : Don't care.

35. IC11 on the Mother Board is using the Dual D-FFs with Preset and Clear IC YWMC74HC74AF.

Description of this IC is as follows:


$\overline{1CLR}$ 1
1D 2
1CK 3
$\overline{1PR}$ 4
1Q 5
$\overline{1Q}$ 6
GND 7
14 VCC
13 $\overline{2CLR}$
12 2D
11 2CK
10 $\overline{2PR}$
9 2Q
8 $\overline{2Q}$
(TOP VIEW)

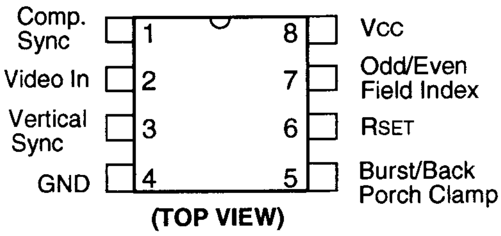
Truth Table

INPUTS				OUTPUTS		Function
$\overline{CLR}$	$\overline{PR}$	D	CK	Q	$\overline{Q}$	
L	H	*	*	L	H	Clear
H	L	*	*	H	L	Preset
L	L	*	*	H	H	—
H	H	L	↑	L	H	—
H	H	H	↑	H	L	—
H	H	*	↓	Qn	$\overline{Qn}$	No Change

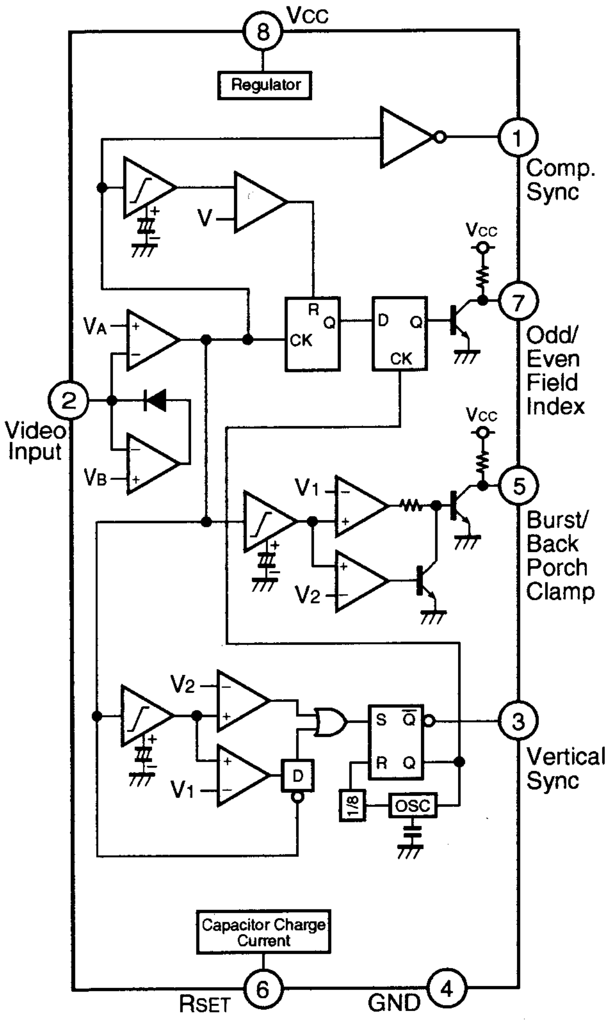
* : Don't care.

IC Description (WV-PS550)

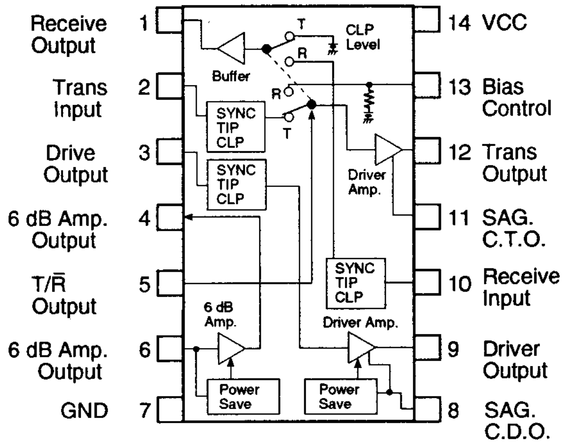
1. IC3 on the Demodulator Board and IC2 on the Modulator Board are using the Sync Separator IC YWLM1881M.
   Description of this IC is as follows:


Comp. Sync 1
Video In 2
Vertical Sync 3
GND 4
8 Vcc
7 Odd/Even Field Index
6 RSET
5 Burst/Back Porch Clamp

(TOP VIEW)

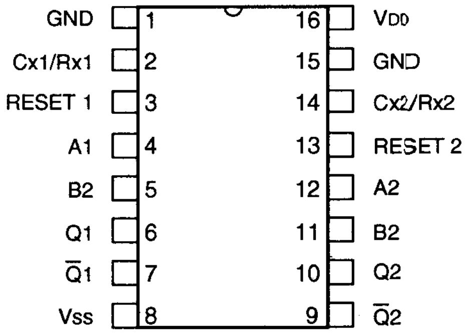

8 Vcc
Regulator
1 Comp. Sync
V-
Vcc
7 Odd/ Even Field Index
VA
R Q CK
D Q CK
2 Video Input
VB
Vcc
V1
5 Burst/ Back Porch Clamp
V2
V2
V1
S Q̄
R Q
D
1/8
OSC
3 Vertical Sync
Capacitor Charge Current
6 RSET
4 GND

2. IC4 on the Demodulator Board is using the Video Signal Interface IC YWCX20095A.
   Description of this IC is as follows:


Receive Output 1
Trans Input 2
Drive Output 3
6 dB Amp. Output 4
T/R̄ Output 5
6 dB Amp. Output 6
GND 7
14 VCC
13 Bias Control
12 Trans Output
11 SAG. C.T.O.
10 Receive Input
9 Driver Output
8 SAG. C.D.O.
Buffer
T
R
CLP Level
R
T
SYNC TIP CLP
SYNC TIP CLP
Driver Amp.
SYNC TIP CLP
6 dB Amp.
Driver Amp.
Power Save
Power Save

(TOP VIEW)

3. IC11 on the Demodulator Board, IC10 on the Modulator Board are using the Dual Precision Retriggerable Monostable Multivibrator IC YWUPD4538BG.
   Description of this IC is as follows:


GND 1
Cx1/Rx1 2
RESET 1 3
A1 4
B2 5
Q1 6
Q̄1 7
Vss 8
16 VDD
15 GND
14 Cx2/Rx2
13 RESET 2
12 A2
11 B2
10 Q2
9 Q̄2

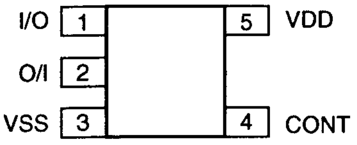
(TOP VIEW)

Truth Table

INPUT			OUTPUT		NOTE
A	B	RESET	Q	$\overline{Q}$	
↑	H	H	⊓	⊔	Output Pulse
↑	L	H	L	H	Inhibit
H	↓	H	L	H	Inhibit
L	↓	H	⊓	⊔	Output Pulse
*	*	L	L	H	Inhibit

* : Don't care.

4. IC10 and IC16 on the Demodulator Board, IC4 and IC7 on the Modulator Board are using the Single Analog Switch/Multiplexer/Demultiplexer IC YWTC4S66FR.
Description of this IC is as follows:

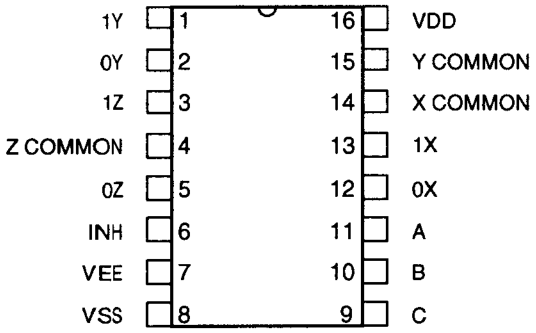

I/O 1
O/I 2
VSS 3
5 VDD
4 CONT

(TOP VIEW)

Truth Table

Input Control	Switch I/O – O/I
L	OFF
H	ON

5. IC12 and IC14 on the Demodulator Board are using the Triple 2-ch Analog Multiplexers/Demultiplexers IC YWUPD4053BG.
Description of this IC is as follows:


1Y 1
0Y 2
1Z 3
Z COMMON 4
0Z 5
INH 6
VEE 7
VSS 8
16 VDD
15 Y COMMON
14 X COMMON
13 1X
12 0X
11 A
10 B
9 C

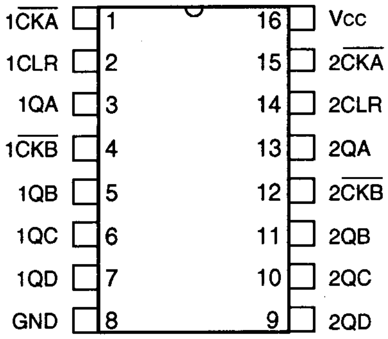
(TOP VIEW)

Truth Table

INHIBIT	C	B	A	X COMMON	Y COMMON	Z COMMON
L	L	L	L	0X	0Y	0Z
L	L	L	H	1X	0Y	0Z
L	L	H	L	0X	1Y	0Z
L	L	H	H	1X	1Y	0Z
L	H	L	L	0X	0Y	1Z
L	H	L	H	1X	0Y	1Z
L	H	H	L	0X	1Y	1Z
L	H	H	H	1X	1Y	1Z
H	*	*	*	NONE	NONE	NONE

* : Don't care.

6. IC9 on the Modulator Board are using the Dual Decade Counter IC UPD74HC390G.
Description of this IC is as follows:


1$\overline{\text{CKA}}$ 1
1CLR 2
1QA 3
1$\overline{\text{CKB}}$ 4
1QB 5
1QC 6
1QD 7
GND 8
16 Vcc
15 2$\overline{\text{CKA}}$
14 2CLR
13 2QA
12 2$\overline{\text{CKB}}$
11 2QB
10 2QC
9 2QD

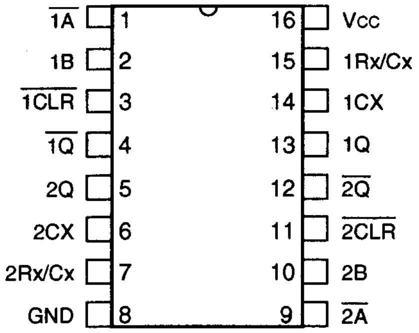
(TOP VIEW)

Truth Table

INPUTS			OUTPUTS			
$\overline{\text{CKA}}$	$\overline{\text{CKB}}$	CLR	QA	QB	QC	QD
*	*	H	L	L	L	L
↓	*	L	Binary Count up			
*	↓	L	Quinary Count up			

* : Don't care.

7. IC13 and IC14 on the Modulator Board are using the Dual Monostable Multivibrator IC UPD74HC221AG.
Description of this IC is as follows:


$\overline{\text{1A}}$ 1
1B 2
$\overline{\text{1CLR}}$ 3
$\overline{\text{1Q}}$ 4
2Q 5
2CX 6
2Rx/Cx 7
GND 8
16 Vcc
15 1Rx/Cx
14 1CX
13 1Q
12 $\overline{\text{2Q}}$
11 $\overline{\text{2CLR}}$
10 2B
9 $\overline{\text{2A}}$

(TOP VIEW)

Truth Table

INPUTS			OUTPUTS		NOTE
$\overline{\text{A}}$	B	$\overline{\text{CLR}}$	Q	$\overline{\text{Q}}$	
↓	H	H	⊓	⊔	Output Pulse
*	L	H	L	H	Inhibit
H	*	H	L	H	Inhibit
L	↑	H	⊓	⊔	Output Pulse
L	H	↑	⊓	⊔	Output Pulse
*	*	L	L	H	Inhibit

* : Don't care.

ADJUSTMENT PROCEDURE

1. Adjustment Procedure

- The following Test Equipments are required for adjustment of the Industrial Colour Camera WV-E550E and WV-PS550.
- Digital Multimeter
- Frequency Counter
- Oscilloscope
- Signal Generator
- Special Effects Generator
- G/L Signal Generator
- Waveform Monitor
- Vectorscope
- Underscanned Colour Video Monitor
- DC Power Supply Unit
- Auto Iris Servo Control Zoom Lens
- Lens Cable (WV-CA12T12)
- 36-pin/28-pin Camera Cable
- N-Coaxial Cable
- Remote Control Unit (WV-RC700A)
- Remote Control Box (WV-CB700AE)
- Lighting (200 footcandles (2,000 lux), 3200°K)
- Lux Meter
- In-Mega Chart
- ND-8 Filter
- D Sub/BNC Cable (WV-CA9T5)
- Logarithmic Gray Scale Chart (Part Number: YWV2310RB99) as shown in Fig. 1-1.

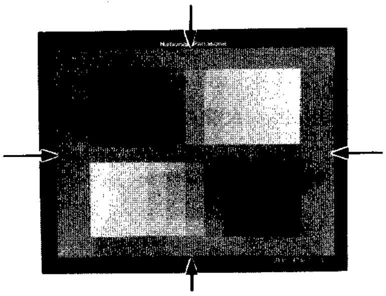


Fig. 1-1

- Extension Board (Part Number: YWV0EA0289AN) for System Control Board, Preprocess Board and Preamp/Encoder Board as shown in Fig. 1-2.

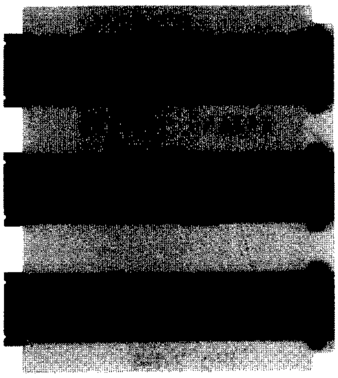


Fig. 1-2

- Extension Board (Part Number: YWV0EA0288AN) for Power Board and Digital Process Board as shown in Fig. 1-3.

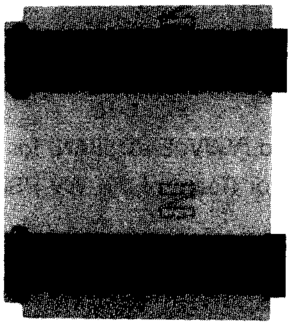


Fig. 1-3

- Extension Board (Part Number: YWV0EA0287AN) for Drive Board and Preamp/Encoder Board as shown in Fig. 1-4.

Fig. 1-4

- Flexible Cable (Part Number: YWV0EA0295AN 1 piece) for between System Control Board and Digital Process Board as shown in Fig. 1-5.

Fig. 1-5

- Flexible Cable (Part Number: YWV0EA0292AN 3 pieces) for between Rear Board and Mother Board as shown in Fig. 1-6.

Fig. 1-6

- Flexible Cable (Part Number: YWV0EA0293AN 3 pieces) for between Sync Board and Preamp/Encoder Board as shown in Fig. 1-7.

Fig. 1-7

- Flexible Cable (Part Number: YWV0EA0290AN 1 piece) for between Drive Board and Sensor Board as shown in Fig. 1-8.

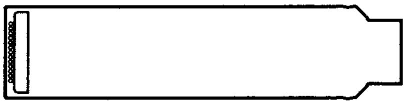


Fig. 1-8

- Flexible Cable (Part Number: YWV0EA0291AN 1 piece) for between Preamp/Encoder Board and Sensor Board as shown in Fig. 1-9.

Fig. 1-9

- Flexible Cable (Part Number: YWV0EA0294AN) for between System Control Board and Digital Process Board as shown in Fig. 1-10.

Fig. 1-10

- Extension Board (YWV0EA0158AN) for Modulator Board and Demodulator Board of the WV-PS550 as shown in Fig. 1-11.

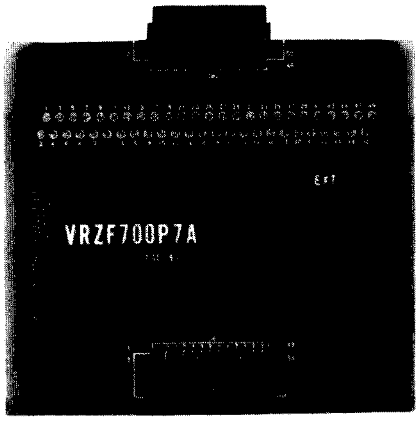
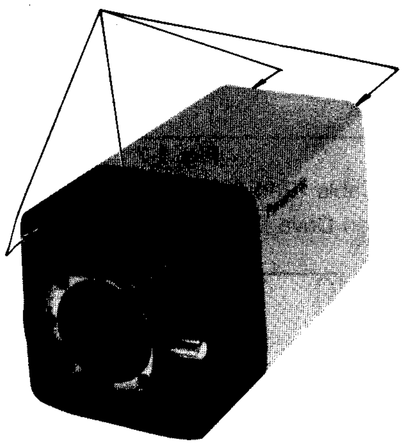

VRZF700P7A

Fig. 1-11

2. Disassembling Procedure for Adjustment

2.1. WV-E550E

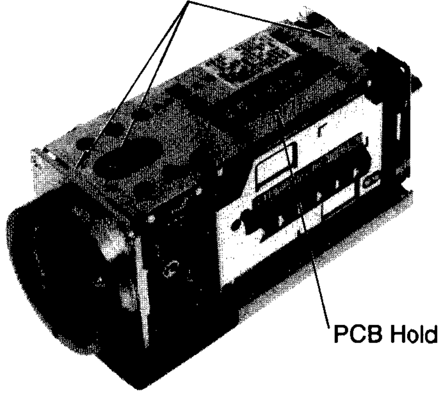
- Referring to Fig. 2-1-1, remove four screws fixing the Upper Cover and remove the Upper Cover.



Remove four screws.

Fig. 2-1-1

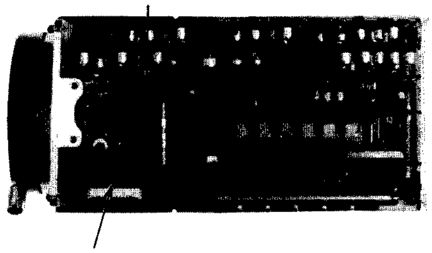
- Referring to Fig. 2-1-2, remove three screws fixing the PCB Holder and remove the PCB Holder.
- Pull the Rear Board Ass'y out from three connectors on the Mother Board.



Remove three screws.

Fig. 2-1-2

- Referring to Fig. 2-1-3, disconnect one Flexible Board from CN3 on the Drive Board and disconnect one Flexible Board from the CN10 on the Preamp /Encoder Board.



Disconnect Flexible Board.

Disconnect Flexible Board.

Fig. 2-1-3

- Referring to Fig. 2-1-4, pull each Board Ass'y out from their connectors on the Mother Board Ass'y.

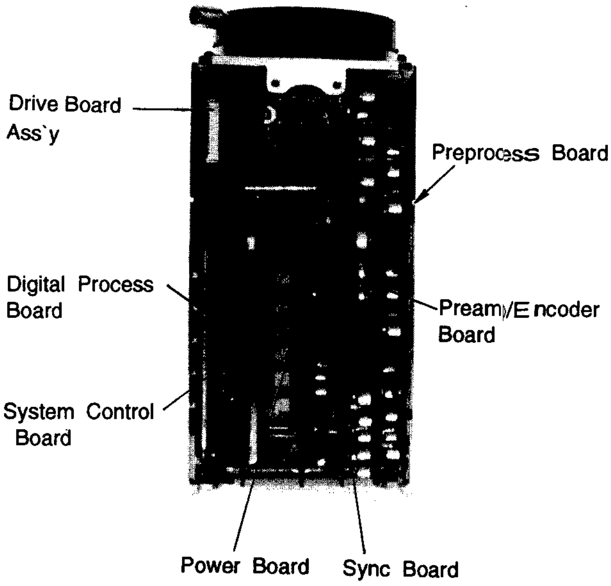

Drive Board Ass'y
Preprocess Board
Digital Process Board
Preamp/Encoder Board
System Control Board
Power Board
Sync Board

Fig. 2-1-4

2.2. WV-PS550

- Referring to Fig. 2-2-1, remove sixteen screws fixing the Upper Cover and the Bottom Cover, and then remove the Upper Cover and the Bottom Cover.

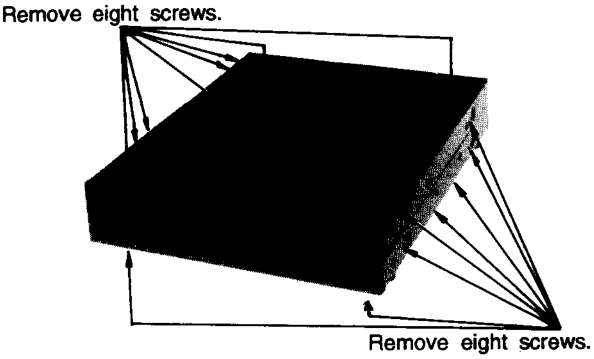

Remove eight screws.
Remove eight screws.

Fig. 2-2-1

- Referring to Fig. 2-2-2, remove five screws fixing the Power Board and disconnect three connectors from the Power Board, then remove the Power Board.
- Remove two screws fixing the Mounting Bracket and remove the Mounting Bracket.

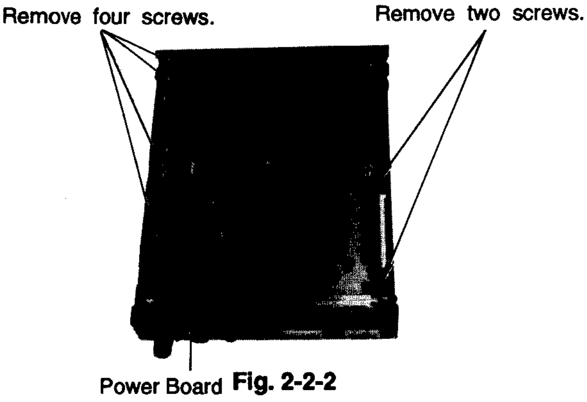

Remove four screws.
Remove two screws.
Power Board

Fig. 2-2-2

- Referring to Fig. 2-2-3, remove two screws fixing the Power Supply Unit and remove the Power Supply Unit.

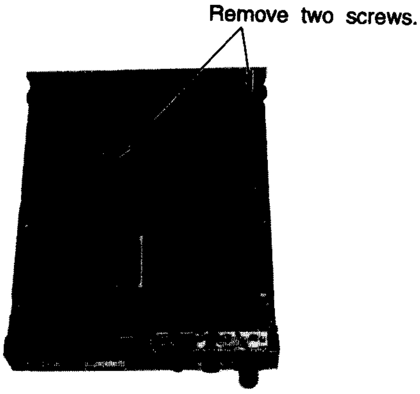

Remove two screws.

Fig. 2-2-3

- Referring to Fig. 2-2-4, turn the Mother Ass'y then pull the Modulator Board Ass'y and the Demodulator Board Ass'y out from the connectors on the Mother Board.
- Remove one screw and one plastic rivet fixing the Audio Board and pull the Audio Board Ass'y from the connector on the Audio Mother Board.

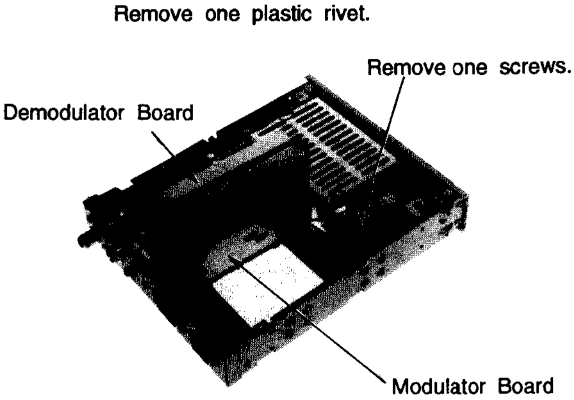

Remove one plastic rivet.
Remove one screws.
Demodulator Board
Modulator Board

Fig. 2-2-4

3. Head Optical Ass'y Replacement

- Referring to Fig. 2-1-3, disconnect one Flexible Board from CN3 on the Drive Board and disconnect one Flexible Board from the CN10 on the Preamp /Encoder Board.
- Referring to Fig. 3-1, remove two screws and remove the Head Optical Ass'y.

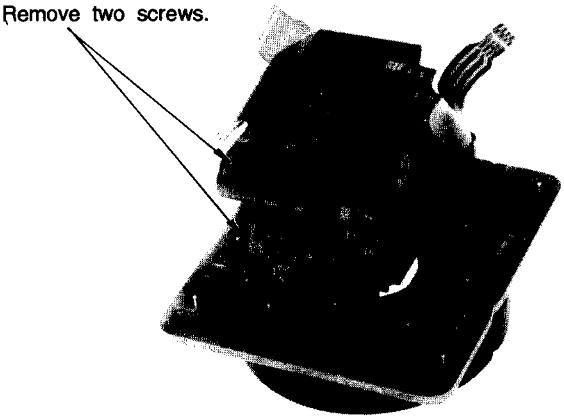

Remove two screws.

Fig. 3-1

4. Connection and Setting Up for Adjustment

4.1. Connection

The Fig. 4-1-1 shows the connecting diagram for adjustment of WV-E550E.

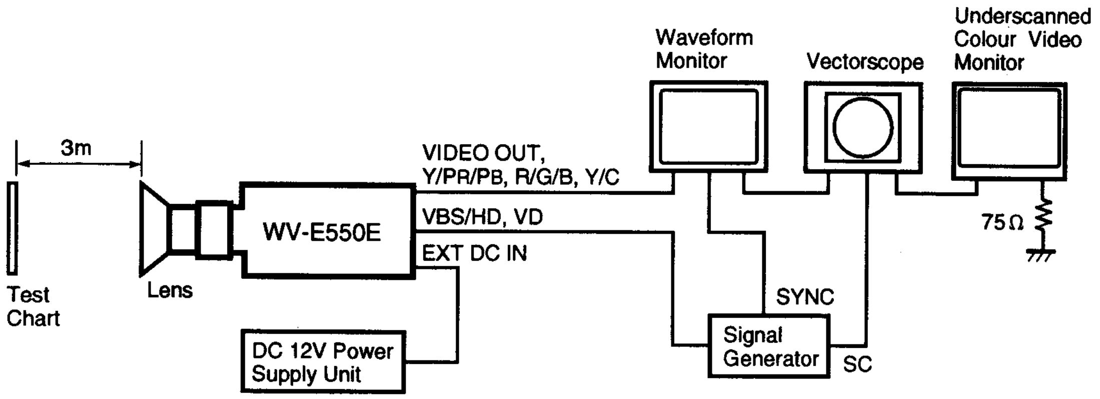

Waveform Monitor
Vectorscope
Underscanned Colour Video Monitor
3m
VIDEO OUT, Y/PR/PB, R/G/B, Y/C
VBS/HD, VD
EXT DC IN
WV-E550E
75Ω
Test Chart
Lens
SYNC
DC 12V Power Supply Unit
Signal Generator
SC

Fig. 4-1-1

- Connect the Underscanned Colour Video Monitor to the VIDEO OUT Connector on the Rear Panel of the WV-E550E through the Waveform Monitor and the Vectorscope using the coaxial cables.
- Terminate the input terminal of the Underscanned Colour Video Monitor with 75Ω.
- Connect the Signal Generator to the VBS/HD Connector on the Rear Panel using coaxial cable.
- Connect the 12V DC Power Supply Unit to the EXT DC IN Connector on the Rear Panel of the WV-E550E.
- Connect prove of the Oscilloscope, Frequency Counter and Digital Voltmeter to desired Test Point in each adjustment step.

The Fig. 4-1-2 shows the connecting diagram for adjustment of WV-PS550.

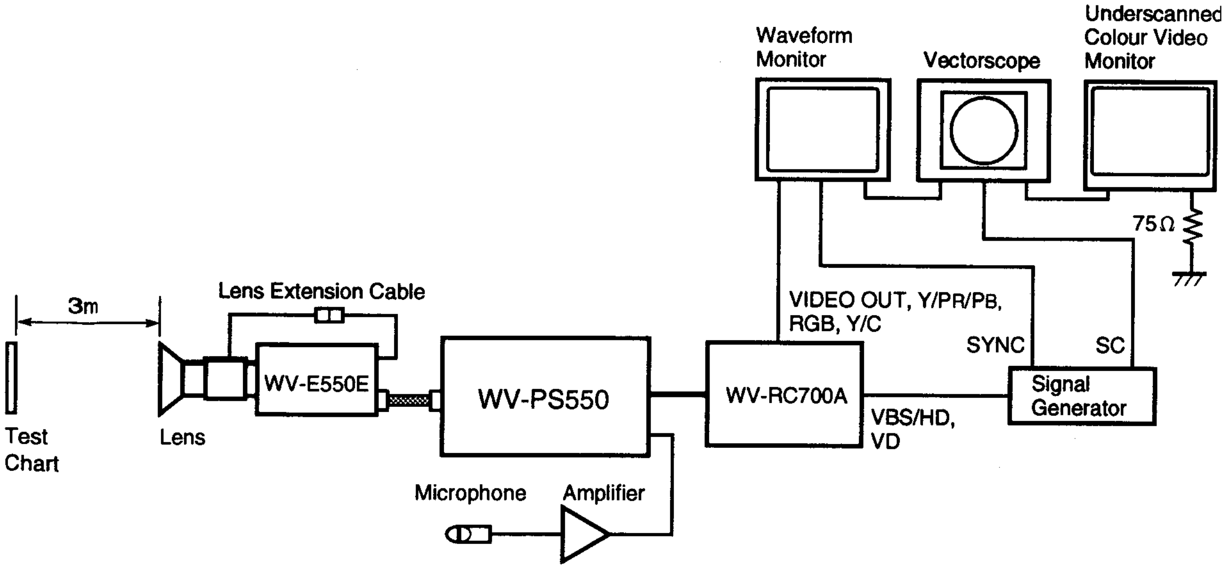

Waveform Monitor
Vectorscope
Underscanned Colour Video Monitor
75Ω
3m
Lens Extension Cable
VIDEO OUT, Y/PR/PB, RGB, Y/C
SYNC
SC
WV-E550E
WV-PS550
WV-RC700A
Signal Generator
VBS/HD, VD
Test Chart
Lens
Microphone
Amplifier

Fig. 4-1-2

- Connect the Underscanned Colour Video Monitor to the VIDEO OUT 1 Connector on the Rear Panel of the WV-RC700A through the Waveform Monitor and the Vectorscope using the coaxial cables.
- Terminate the input terminal of the Underscanned Colour Video Monitor with 75Ω.
- Connect the Signal Generator to the GEN-LOCK IN Connector on the Rear Panel of the WV-RC700A using the coaxial cable.

- Connect between the MPX Connector on the Rear Panel of the WV-RC700A and the MPX Connector on the Rear panel of the WV-PS550 using the N-Coaxial Cable, then Cable Select Switch on the Rear Panel of the WV-RC700A set to VP side.
- Connect between the Control Connector on the Rear Panel of the WV-E550E and the Camera Connector on the Rear Panel of the WV-PS550 using the 36-pin/28pin Camera Cable.
- Connect prove of the Oscilloscope, Frequency Counter and Digital Voltmeter to desired Test Point in each adjustment step.

4.2. Mode Setting for Adjustment

- The modes setting for adjustment should be set with the **PAGE**, **ITEM (AWC)**, **UP (ABC)** and **DOWN (BAR)** switches are mounted on the Rear Panel of the Camera.
- Press the **PAGE** switch more than 3 seconds, the Setup Menu as shown in Table 4-1 will be displayed.

```
        ** SETUP **
GAIN            AGC HIGH
IRIS            AUTO
SHUTTER         OFF
WHITE BAL       ATW
DTL LEVEL       LOW
SCENE FILE      SCENE1

INIT    USER    END
```

Table 4-1

- Select the item **GAIN** by the **ITEM** switch, then set to **0DB** by either the **UP** switch or **DOWN** switch.
- Select the item **IRIS** by the **ITEM** switch, then set to **MANU** by either the **UP** switch or **DOWN** switch.
- Select the item **DTL LEVEL** by the **ITEM** switch, then set to **OFF** by either the **UP** switch or **DOWN** switch.
- The menu as shown in Table 4-2 will be obtained.

```
        ** SETUP **
GAIN            0DB
IRIS            MANU
SHUTTER         OFF
WHITE BAL       ATW
DTL LEVEL       OFF
SCENE FILE      USER A

INIT    USER    END
```

Table 4-2

- Select the item **INIT** by the **ITEM** switch, then press the **PAGE** switch three times.
- Select the item **COLOUR BAR** by **ITEM** switch, then set to **2** by either the **UP** switch or **DOWN** switch so that the menu as shown in Table 4-3 will be displayed.

```
NO.3   ** INITIAL **
SYNCHRO-SCAN    253/525
FLD/FRM         FIELD
GAMMA           ON
2D LPF          OFF
COLOR BAR       2


RET   END
```

Table 4-3

- Select the item **USER** by the **ITEM** switch, then press the **PAGE** switch so that the menu as shown in Table 4-4 will be displayed.

```
NO.1      USER A        * 0DB
 (.35 - .45)        CURR   NEW
*GAMMA               .45   .45
*GAMMA               .45   .45
 KNEE POINT          88%   88%
 WHITE CLIP          110   110
*H. DTL LEVEL H       31    31
*V. DTL LEVEL H       31    31
*H. DTL LEVEL L       15    15
*V. DTL LEVEL L       15    15
 RET   END
```

Table 4-4

- Select the item **KNEE POINT** by the **ITEM** switch, then set to **98 %** by either the **UP** switch or **DOWN** switch.
- Select the item **END** by the **ITEM** switch, then press the **PAGE** switch.
- All adjustment steps should be done with this standard menu, unless otherwise specified.

4.3. Setting Up

Set the Standard Picture as follows:

- Mount the Auto Iris Lens on the Camera Head.
- Set the Logarithmic Gray Scale Chart.
- Incident light intensity of 2,000 ± 50 lux on the Logarithmic Gray Scale Chart.
- Aim the Camera at the Logarithmic Gray Scale Chart.
- Set the Camera so that the Logarithmic Gray Scale Chart becomes full picture on the Underscanned Colour Video monitor.
- Connect the Oscilloscope to TP201(G IN) on the Preprocess Board.

- Turn the Lens Focus to obtain correct focal point.
- Set the Lens Iris so that the peak level of the gray scale from the blanking level becomes 300 mV as shown in Fig. 4-2.

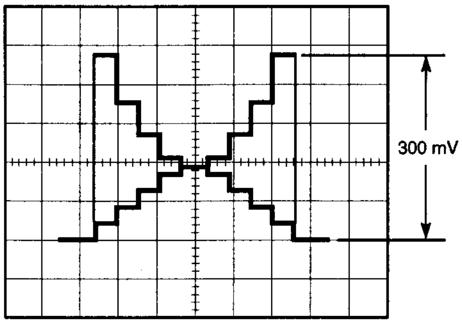


Fig. 4-2

- The adjustment should be done with this initial setting, unless otherwise specified.

5.1. Adjustment Procedure for WV-E550E

- Refer to the Location of the Test Points and Adjusting Controls on page 62.

■ When adjsting the Power Board, use Extension Board (Part No. : YWV0EA0288AN) as shown in page 38.

(1) 5.2V Adjustment

Test Point:	**TP2 (5.2V)**	**Power Board**
Adjust:	**VR1 (5.2V)**	**Power Board**

- Connect the Digital Voltmeter to TP2.
- Adjust VR1 to obtain 5.2 ± 0.05 V DC.

(2) Reset Phase Adjustment

Test Point:	**TP3 (FREQ)**	**Power Board**
Adjust:	**VR2 (FREQ)**	**Power Board**

- Connect the Digital Voltmeter to TP3.
- Trigger the Oscilloscope at the H rate.
- Adjust VR2 so that the phase of the Reset Pulse becomes 8T as shown in Fig. 5-1-1.

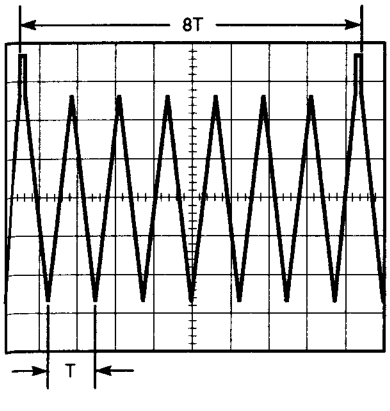


Fig. 5-1-1

■ When adjsting the Drive Board, use Extension Board (Part No. : YWV0EA0287AN) and Flexible Cable (Part No. : YWV0EA0291AN) as shown in page 38.

(3) Drive PLL Adjustment

Test point:	**TP7 (PD)**	**Drive Board**
Adjust:	**L1 (28MHz VCO)**	**Drive Board**

- Connect the Digital Voltmeter to TP7.
- Adjust L1 to obtain 1.8 ± 0.2 V DC.

(4) VSUB (CCD Bias) Adjustment

Test Point:	**TP4 (SUB-B)**	**Drive Board**
	TP5 (SUB-G)	**Drive Board**
	TP6 (SUB-R)	**Drive Board**
Adjust:	**VR4 (SUB-B)**	**Drive Board**
	VR5 (SUB-G)	**Drive Board**
	VR6 (SUB-R)	**Drive Board**

- Referring to Fig. 5-1-2, check each VSUB voltage on the Indication Label of the Head Optical Ass'y.
- Connect the Digital Voltmeter to TP4.
- Adjust VR4 to obtain Bch VSUB Voltage which indicated on the label.
- Change the Digital Voltmeter to TP5.
- Adjust VR5 to obtain Gch VSUB Voltage which indicated on the label.
- Change the Digital Voltmeter to TP6.
- Adjust VR6 to obtain Rch VSUB Voltage which indicated on the label.

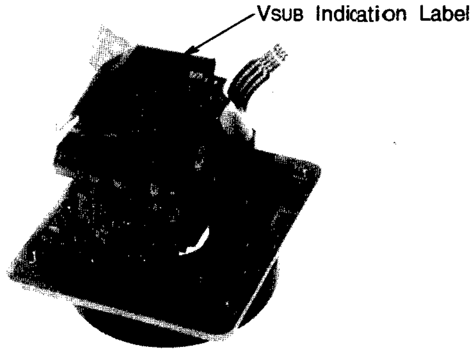


Fig. 5-1-2

(5) Reset Gate Adjustment

Test Point:	**TP502 (R OUT)**	**Preamp/Encoder Board**
	TP602 (G OUT)	**Preamp/Encoder Board**
	TP702 (B OUT)	**Preamp/Encoder Board**
	TP401 (GND)	**Preamp/Encoder Board**
Adjust:	**VR1 (RG-R)**	**Drive Board**
	VR2 (RG-G)	**Drive Board**
	VR3 (RG-B)	**Drive Board**

- Aim the Camera at the Logarithmic Gray Scale Chart.
- Set the Lens iris fully open.

- Connect the Ground terminal of the Oscilloscope to TP401.
- Connect the Oscilloscope to TP502.
- Adjust VR1 so that the Preamp output signal becomes maximum.
- Change the Oscilloscope to TP602.
- Adjust VR2 so that the Preamp output signal becomes maximum.
- Change the Oscilloscope to TP702.
- Adjust VR3 so that the Preamp output signal becomes maximum.

■ When adjsting the Sync Board, use Extension Board (Part No. : YWV0EA0289AN) for Encoder Section, Extension Board (Part No. : YWV0EA0287AN) for Preamp Section and Flexible Cable (Part No. : YWV0EA0290AN) for Preamp section as shown in page 38.

(6) H-LOCK Frequency Adjustment

Test point: **TP8 (SC)** **Sync Board**
Adjust: **VR1 (H-LOCK)** **Sync Board**

- Connect the Frequency Counter to TP8.
- Adjust VR1 to obtain 4.433618 MHz ± 10 Hz.

(7) G/L Sync PLL Adjustment

Test point: **TP5 (G/L VCO)** **Sync Board**
Adjust: **L1 (G/L VCO)** **Sync Board**

- Supply the Black Burst Signal or Video signal to the VBS/HD Connector on the Rear Panel.
- Connect the Digital Voltmeter to TP5.
- Adjust L1 to obtain 2.8 ± 0.2 V DC.

(8) Clock Pulse Phase Adjustment

Test point: **TP6 (8FSC)** **Digital Process Board**
TP5 (4FSC) **Digital Process Board**
TP2 (8FSC-2) **Digital Process Board**
TP4 (4FSC-2) **Digital Process Board**
TP8 (GND) **Digital Process Board**
Adjust: **CT2 (8FSC-2 PHASE)** **Digital Process Board**
CT1 (4FSC PHASE) **Digital Process Board**
CT3 (4FSC-2 PHASE) **Digital Process Board**

- Connect CH1 of the Oscilloscope to TP6.
- Connect CH2 of the Oscilloscope to TP5.
- Connect the Ground terminal of the Oscilloscope to TP8.
- Adjust CT2 to obtain 5 ± 1 nsec as shown in Fig. 5-1-3.

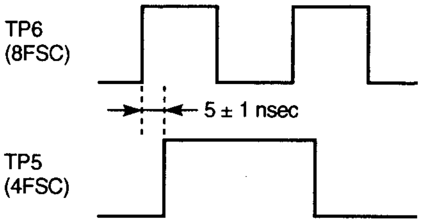


Fig. 5-1-3

- Change CH1 of the Oscilloscope to TP5.
- Change CH2 of the Oscilloscope to TP2.
- Adjust CT1 to obtain 4 ± 1 nsec as shown in Fig. 5-1-4.

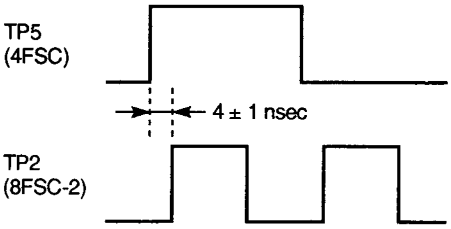


Fig. 5-1-4

- Change CH1 of the Oscilloscope to TP2.
- Change CH2 of the Oscilloscope to TP4.
- Adjust CT3 to obtain 4 ± 1 nsec as shown in Fig. 5-1-5.

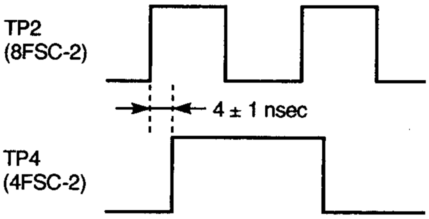


Fig. 5-1-5

(9) Character Position Adjustment

Test point: **VIDEO OUT CONNECTOR** **Rear Panel**
Adjust: **CT1 (CHARACTER)** **System Control Board**

- Press the **DOWN (BAR)** switch more than 3 seconds so that the Colour Bar 2 mode is selected.
- Press the **PAGE** switch on the Rear Panel more than 3 seconds.
- Adjust CT1 so that the left edge of the **U** character of the **SHUTTER** word becomes a divider line of the White and Yellow of the Colour Bar as shown in Fig. 5-1-6.

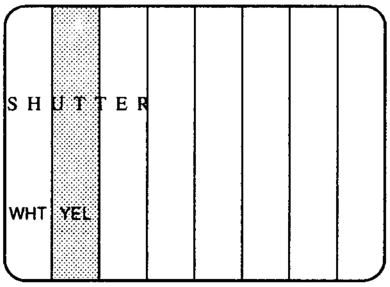


Fig. 5-1-6

- When adjsting the Preamp/Encoder Board, use Extension Board (Part No. : YWV0EA0289AN) for Encoder Section, Extension Board (Part No. : YWV0EA0287AN) for Preamp Section and Flexible Cable (Part No. : YWV0EA0290AN) for Preamp section as shown in page 38.

(10) Colour Bar Adjustment

- Press the **DOWN (BAR)** switch more than 3 seconds so that the Colour Bar 2 mode is selected.

(10)-1 Y/C Mode (OUTPUT SEL2) Adjustment

Test Point: **Pin 6 of CN6 (Y)** **Rear Panel**

Adjust: **VR3 (Y)** **Preamp/Encoder Board**
VR1 (SYNC) **Preamp/Encoder Board**

- Connect the terminated Oscilloscope with 75 Ω to the Pin 6 of the VIDEO/RGB Connector.
- Open the page 5 of the Initial Menus by the **PAGE** switch.
- Select the item **OUTPUT SEL2** by the **ITEM** switch, then set the **Y/C** mode by either **UP** switch or **DOWN** switch, the menu as shown in Table 5-1-1 will be displayed.

```
NO.5   ** INITIAL **
OUTPUT SEL1   Y/C
OUTPUT SEL2   Y/C
SYNC SEL      0.3V
CAMERA ID     OFF
TIME DATE     OFF

RET   END
```

Table 5-1-1

- Adjust VR3 so that the Y Level becomes 700 ± 14 mV as shown in Fig. 5-1-7.
- Adjust VR1 so that the Sync Level becomes 300 ± 14 mV as shown in Fig. 5-1-7.

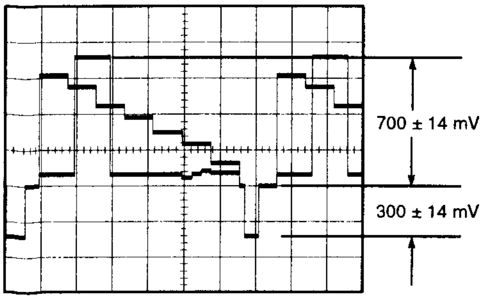


Fig. 5-1-7

(10)-2 ENC Mode (OUTPUT SEL2) Adjustment

Test Point: **Pin 6 of VIDEO/RGB Connector**
Rear Panel

Adjust: **VR4 (COMP Y)** **Preamp/Encoder Board**

- Connect the terminated Oscilloscope with 75 Ω to the Pin 6 of the VIDEO/RGB Connector.
- Open the page 5 of the Initial Menus by the **PAGE** switch.
- Select the item **OUTPUT SEL2** by the **ITEM** switch, then set the **ENC** mode by either the **UP** switch or **DOWN** switch, the menu as shown in Table 5-1-2 will be displayed.

```
NO.5   ** INITIAL **
OUTPUT SEL1   Y/C
OUTPUT SEL2   ENC
SYNC SEL      0.3V
CAMERA ID     OFF
TIME DATE     OFF

RET   END
```

Table 5-1-2

- Adjust VR4 so that the COMP Y Level becomes 700 ± 14 mV as shown in Fig. 5-1-8.

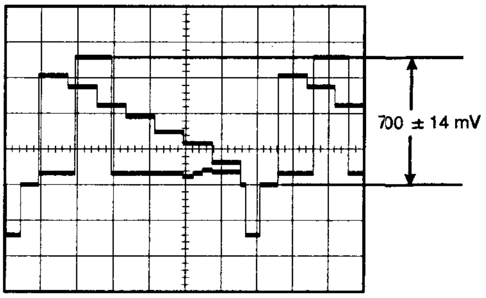


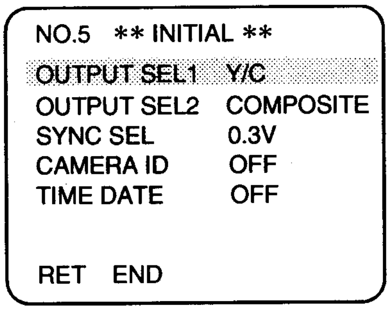
Fig. 5-1-8

(10)-3 Composite Mode (OUTPUT SEL2) Adjustment

Test Point: **VIDEO OUT CONNECTOR** **Rear Panel**
Pin 6 of VIDEO/RGB Connector
Rear Panel

Adjust: **VR5 (C GAIN)** **Preamp/Encoder Board**
VR6 (R-Y GAIN) **Preamp/Encoder Board**
VR7 (CAR BAL B) **Preamp/Encoder Board**
VR8 (CAR BAL R) **Preamp/Encoder Board**
CT1 (PHASE) **Preamp/Encoder Board**
VR14 (BURST LEVEL)
Preamp/Encoder Board
VR24 (W-CLIP) **Preamp/Encoder Board**

- Open the page 5 of the Initial Menus by the **PAGE** switch.
- Select the item **OUTPUT SEL2** by the **ITEM** switch, then set the **COMPOSITE** mode by either the **UP** switch or **DOWN** switch, the menu as shown in Table 5-1-3 will be displayed.



NO.5 ** INITIAL **
OUTPUT SEL1 Y/C
OUTPUT SEL2 COMPOSITE
SYNC SEL 0.3V
CAMERA ID OFF
TIME DATE OFF

RET END

Table 5-1-3

- Adjust VR5 so that the each chroma vector positions at their correct positions on the Vectorscope as shown in Fig. 5-1-9.
- Adjust VR6 so that the each chroma vector positions at their correct positions on the Vectorscope as shown in Fig. 5-1-9.

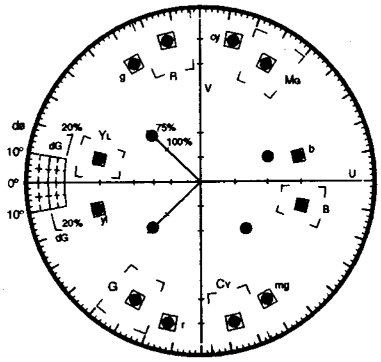

cy
Mg
R
g
V
dø
10°
0°
10°
20%
dG
YL
75%
100%
b
U
B
20%
dG
yl
G
Cy
mg
r

Fig. 5-1-9

- Set the Gain Control of the Vectorscope to maximum.
- Adjust VR7 so that the vector positions at center of the Vectorscope as shown in Fig. 5-1-10.
- Adjust VR8 so that the vector positions at center of the Vectorscope as shown in Fig. 5-1-10.

Positions at Center.

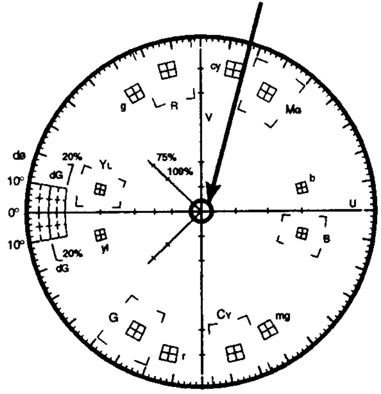

cy
Mg
R
g
V
dø
10°
0°
10°
20%
dG
YL
75%
100%
b
U
B
20%
dG
yl
G
Cy
mg
r

Fig. 5-1-10

- Adjust CT1 so that the each chroma vector positions at their correct positions on the Vectorscope as shown in Fig. 5-1-9.
- Adjust VR14 so that the Burst Level becomes 300 ± 7 mVp-p as shown in Fig. 5-1-11.

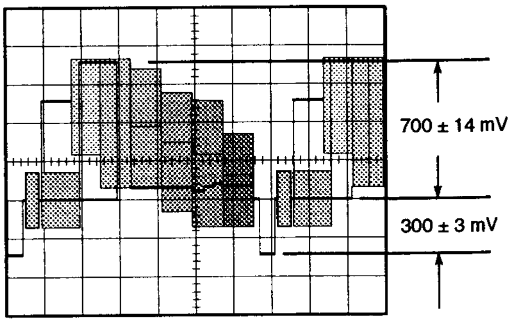


Fig. 5-1-11

- Confirm that the Burst Level becomes 100 % on the Vectorscope.
- Connect the terminated Oscilloscope with 75 Ω to the Pin 6 of CN6.
- Adjust VR24 so that the White Clip Level becomes 112 %.

(10)-4 Burst Phase Adjustment

Test Point: **VIDEO OUT CONNECTOR** **Rear Panel**
Adjust: **VR18 (BURST PHASE)**
Preamp/Encoder Board

- Aim the Camera at the Logarithmic Gray Scale Chart.
- Adjust VR18 so that the Burst Phase becomes correct position of the Vectorscope as shown in Fig. 5-1-12.

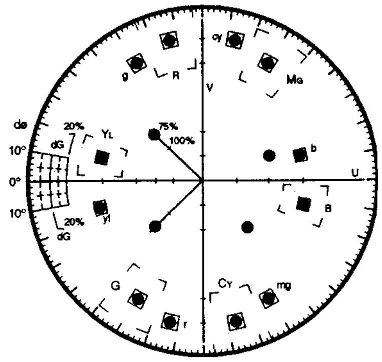

cy
Mg
R
g
V
dø
10°
0°
10°
20%
dG
YL
75%
100%
b
U
B
20%
dG
yl
G
Cy
mg
r

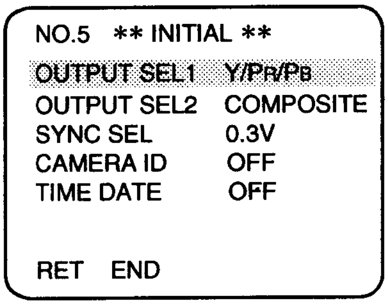
Fig. 5-1-12

(10)-5 Y/PR/PB Mode (OUTPUT SEL1) Adjustment

Test Point: Pin 4 of VIDEO/RGB Connector
Rear Panel
Pin 3 of VIDEO/RGB Connector
Rear Panel
Pin 5 of VIDEO/RGB Connector
Rear Panel

Adjust:	**VR10 (Y)**	**Preamp/Encoder Board**
	VR2 (Y-SYNC)	**Preamp/Encoder Board**
	VR12 (PR)	**Preamp/Encoder Board**
	VR13 (PB)	**Preamp/Encoder Board**
	VR25 (W-CLIP)	**Preamp/Encoder Board**

- Connect the terminated Oscilloscope with 75 Ω to the Pin 4 of the VIDEO/RGB Connector.
- Open the page 5 of the Initial Menus by the **PAGE** switch.
- Select the item **OUTPUT SEL1** by the **ITEM** switch, then set the **Y/PR/PB** mode by either the **UP** switch or **DOWN** switch, the menu as shown in Table 5-1-4 will be displayed.



NO.5 ** INITIAL **
OUTPUT SEL1 Y/PR/PB
OUTPUT SEL2 COMPOSITE
SYNC SEL 0.3V
CAMERA ID OFF
TIME DATE OFF

RET END

Table 5-1-4

- Preadjust VR25 so that the Y Level does not clip.
- Adjust VR10 so that the Y Level becomes 700 ± 14 mV as shown in Fig. 5-1-13.
- Adjust VR2 so that the Sync Level becomes 300 ± 14 mV as shown in Fig. 5-1-13.

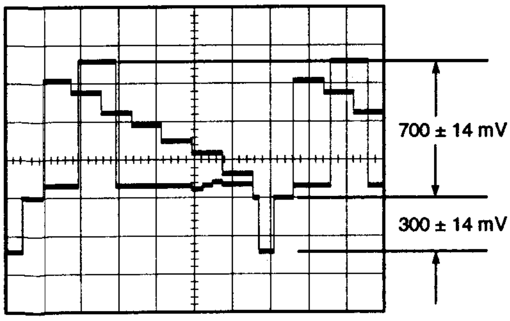


Fig. 5-1-13

- Change the terminated Oscilloscope with 75 Ω to the Pin 3 of the VIDEO/RGB Connector.
- Adjust VR12 so that the PR Level becomes 700 ± 14 mV as shown in Fig. 5-1-14.

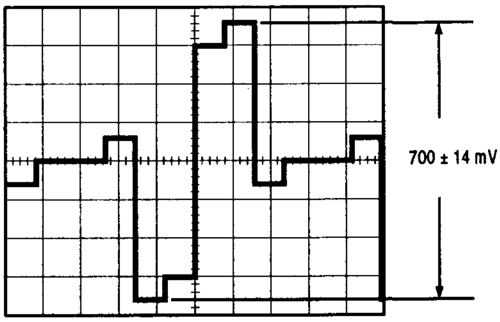


Fig. 5-1-14

- Change the terminated Oscilloscope with 75 Ω to the Pin 5 of the VIDEO/RGB Connector.
- Adjust VR13 so that the PB Level becomes 700 ± 14 mV as shown in Fig. 5-1-15.

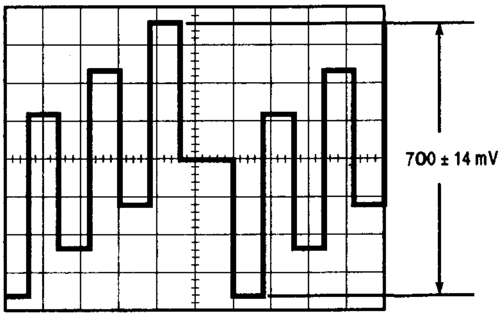


Fig. 5-1-15

- Change the terminated Oscilloscope with 75 Ω to the Pin 4 of the VIDEO/RGB Connector.
- Adjust VR25 so that the Y Level becomes 800± 14 mV.

(10)-6 Y/C Mode (OUTPUT SEL1) Adjustment

Test Point: Pin 4 of VIDEO/RGB Connector
Rear Panel
Pin 3 of VIDEO/RGB Connector
Rear Panel

Adjust:	**VR3 (Y)**	**Preamp/Encoder Board**
	VR9 (C/BURST)	**Preamp/Encoder Board**

- Connect the terminated Oscilloscope with 75 Ω to the Pin 4 of the VIDEO/RGB Connector.
- Open the page 5 of the Initial Menus by the **PAGE** switch.
- Select the item **OUTPUT SEL1** by the **ITEM** switch, then set the **Y/C** mode by either the **UP** switch or **DOWN** switch, the menu as shown in Table 5-1-5 will be displayed.

```
NO.5   ** INITIAL **
OUTPUT SEL1   Y/C
OUTPUT SEL2   COMPOSITE
SYNC SEL      0.3V
CAMERA ID     OFF
TIME DATE     OFF


RET   END
```

Table 5-1-5

- Confirm that the Y Level becomes 700 ± 14 mV.
  If not readjust VR3 so that the Y Level becomes 700 ± 14 mV as shown in Fig. 5-1-16.

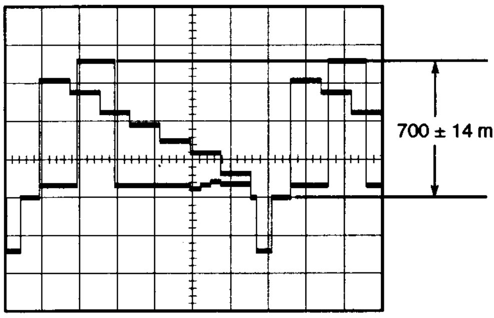


Fig. 5-1-16

- Change the terminated Oscilloscope with 75 Ω to the Pin 3 of the VIDEO/RGB Connector.
- Adjust VR9 so that the Burst Level becomes 300 ± 14 mV as shown in Fig. 5-1-17.

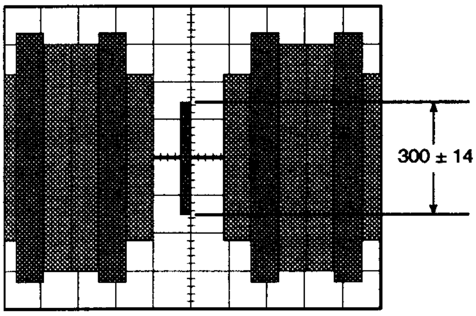


Fig. 5-1-17

(10)-7 R/G/B Mode (OUTPUT SEL1) Adjustment

Test Point:	**Pin 4 (G) of VIDEO/RGB Connector**	**Rear Panel**
	Pin 3 (R) of VIDEO/RGB Connector	**Rear Panel**
	Pin 5 (B) of VIDEO/RGB Connector	**Rear Panel**
Adjust:	**VR21 (G GAIN)**	**Preamp/Encoder Board**
	VR22 (R GAIN)	**Preamp/Encoder Board**
	VR23 (B GAIN)	**Preamp/Encoder Board**

- Connect the terminated Oscilloscope with 75 Ω to the Pin 4 of the VIDEO/RGB Connector.
- Open the page 5 of the Initial Menus by the **PAGE** switch.
- Select the item **OUTPUT SEL1** by the **ITEM** switch, then set the **R/G/B** mode by either the **UP** switch or **DOWN** switch, the menu as shown in Table 5-1-6 will be displayed.

```
NO.5   ** INITIAL **
OUTPUT SEL1   R/G/B
OUTPUT SEL2   COMPOSITE
SYNC SEL      0.3V
CAMERA ID     OFF
TIME DATE     OFF


RET   END
```

Table 5-1-6

- Adjust VR21 so that the white portion of the Video signal level becomes 700 ± 14 mV as shown in Fig. 5-1-18.

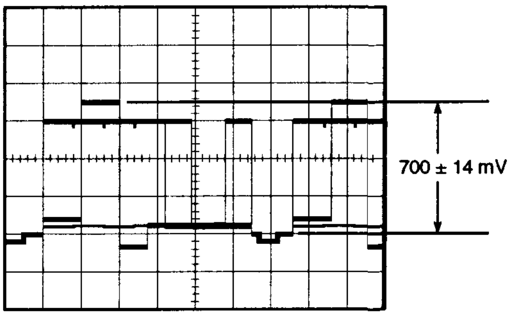
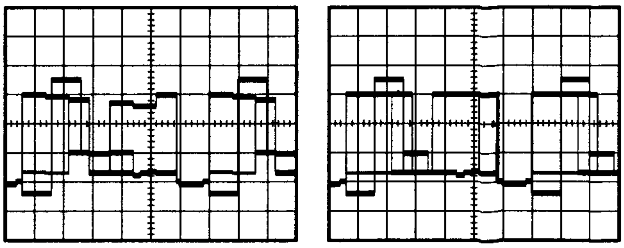


Fig. 5-1-18

- Change the terminated Oscilloscope with 75 Ω to the Pin 3 of the VIDEO/RGB Connector.
- Adjust VR22 so that the Video signal level becomes flat level as shown in Fig. 5-1-19.



No Good Good

Fig. 5-1-19

- Change the terminated Oscilloscope with 75 Ω to the Pin 5 of the VIDEO/RGB Connector.
- Adjust VR23 so that the Video signal level becomes flat level as shown in Fig. 5-1-20.

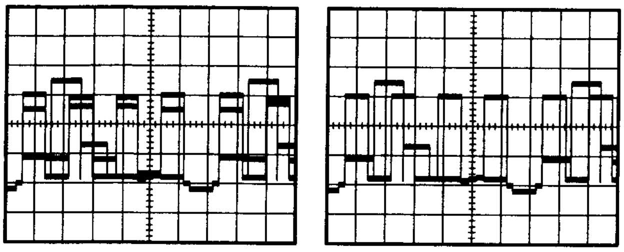

No Good　　Good

Fig. 5-1-20

- Before start to adjust following steps, press the **DOWN (BAR)** switch more than 3 seconds so that the Camera mode is selected.

(11) Preamp DC Offset Adjustment

Test Point:	**TP502 (R OUT)**	**Preamp/Encoder Board**
	TP602 (G OUT)	**Preamp/Encoder Board**
	TP702 (B OUT)	**Preamp/Encoder Board**
	TP401 (GND)	**Preamp/Encoder Board**
Adjust:	**VR501 (R DC)**	**Preamp/Encoder Board**
	VR601 (G DC)	**Preamp/Encoder Board**
	VR701 (B DC)	**Preamp/Encoder Board**

- Aim the Camera at the Logarithmic Gray Scale Chart.
- Set the Lens Iris to F8.
- Connect the Ground terminal of the Oscilloscope to TP401.
- Connect the Oscilloscope to TP502.
- Adjust VR501 so that the Black portion of the Video signal becomes 0 V DC (Ground level) as show in Fig. 5-1-21.
- Connect the Ground terminal of the Oscilloscope to TP602.
- Adjust VR601 so that the Black portion of the Video signal becomes 0 V DC (Ground level) as show in Fig. 5-1-21.
- Connect the Ground terminal of the Oscilloscope to TP702.
- Adjust VR701 so that the Black portion of the Video signal becomes 0 V DC (Ground level) as show in Fig. 5-1-21.

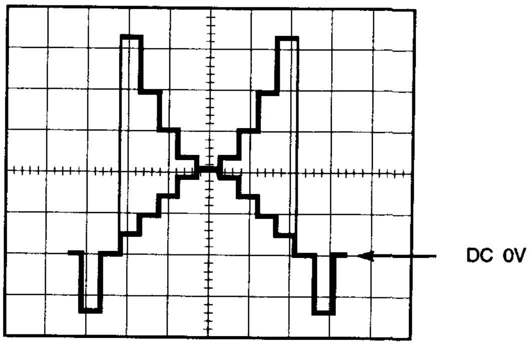


Fig. 5-1-21

(12) Preamp Frequency Response Adjustment

Test Point:	**TP502 (R OUT)**	**Preamp/Encoder Board**
	TP602 (G OUT)	**Preamp/Encoder Board**
	TP702 (B OUT)	**Preamp/Encoder Board**
	TP401 (GND)	**Preamp/Encoder Board**
Adjust:	**CT501 (R FREQ)**	**Preamp/Encoder Board**
	CT601 (G FREQ)	**Preamp/Encoder Board**
	CT701 (B FREQ)	**Preamp/Encoder Board**

- Aim the Camera at the In-Mega Chart.
- Connect the Ground terminal of the Oscilloscope to TP401.
- Connect the Oscilloscope to TP602.
- Set the Lens Iris so that the Video signal level at TP602 becomes 300 mV as shown in Fig. 5-1-22.
- Adjust CT601 so that each response becomes flat level and the 3 MHz signal level becomes 80 % against 0.5 MHz response as 100 % as shown in Fig. 5-1-22.
- Change the Oscilloscope to TP502.
- Adjust CT501 so that each response becomes flat level and the 3 MHz signal level becomes 80 % against 0.5 MHz response as 100 % as shown in Fig. 5-1-22.
- Change the Oscilloscope to TP702.
- Adjust CT701 so that each response becomes flat level and the 3 MHz signal level becomes 80 % against 0.5 MHz response as 100 % as shown in Fig. 5-1-22.

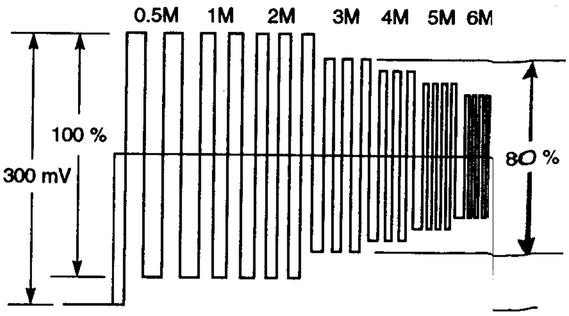


Fig. 5-1-22

- Before start to adjust following steps, short between TP3 and TP4 on the System Control Board to clear the AWC/ABC data.

(13) Input Gain Adjustment

Test Point:	**TP201 (G IN)**	**Preprocess Board**
	TP102 (R GAIN-1)	**Preprocess Board**
	TP202 (G GAIN-1)	**Preprocess Board**
	TP302 (B GAIN-1)	**Preprocess Board**
Adjust:	**VR101 (R GAIN-1)**	**Preprocess Board**
	VR201 (G GAIN-1)	**Preprocess Board**
	VR301 (B GAIN-1)	**Preprocess Board**

- Aim the Camera at the Logarithmic Gray Scale Chart.
- Connect the Oscilloscope to TP201.
- Set the Lens Iris so that the Video signal level becomes 300 mV as shown in Fig. 5-1-23.

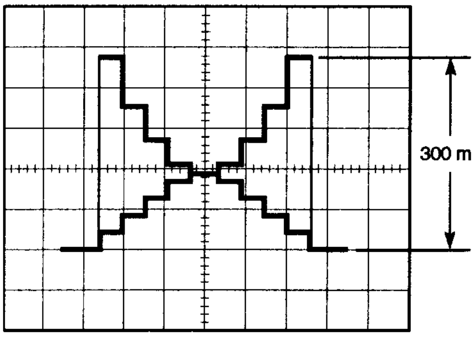


Fig. 5-1-23

- Change the Oscilloscope to TP102.
- Adjust VR101 so that the Video signal level becomes 700 ± 10 mV as shown in Fig. 5-1-24.
- Change the Oscilloscope to TP202.
- Adjust VR201 so that the Video signal level becomes 700 ± 10 mV as shown in Fig. 5-1-24.
- Change the Oscilloscope to TP302.
- Adjust VR301 so that the Video signal level becomes 700 ± 10 mV as shown in Fig. 5-1-24.

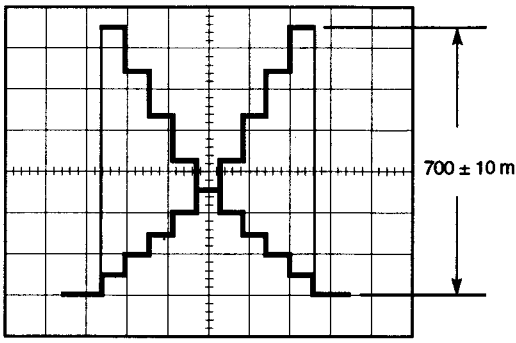


Fig. 5-1-24

(14) Pedestal Adjustment

Test Point:	**VIDEO OUT CONNECTOR**	**Rear Panel**
Adjust:	**VR106 (R PED)**	**Preprocess Board**
	VR206 (G PED)	**Preprocess Board**
	VR306 (B PED)	**Preprocess Board**

- Cap on the Lens.
- Adjust VR106 so that the Pedestal level becomes 10 % and the carrier becomes minimum as shown in Fig. 5-1-25.
- Adjust VR206 so that the Pedestal level becomes 10 % and the carrier becomes minimum as shown in Fig. 5-1-25.
- Adjust VR306 so that the Pedestal level becomes 10 % and the carrier becomes minimum as shown in Fig. 5-1-25.
- Repeat above steps until the Pedestal level becomes 10 % and the carrier becomes minimum.

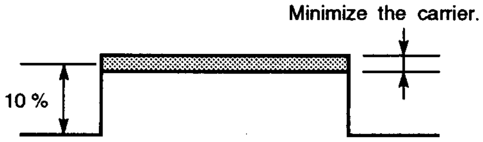


Fig. 5-1-25

(15) 0dB Gain Coarse Adjustment

Test Point:	**TP201 (G IN)**	**Preprocess Board**
	TP103 (R GAIN-2)	**Preprocess Board**
	TP203 (G GAIN-2)	**Preprocess Board**
	TP303 (B GAIN-2)	**Preprocess Board**
Adjust:	**VR104 (R GAIN-2)**	**Preprocess Board**
	VR204 (G GAIN-2)	**Preprocess Board**
	VR304 (B GAIN-2)	**Preprocess Board**

- Aim the Camera at the Logarithmic Gray Scale Chart.
- Connect the Oscilloscope to TP201.
- Set the Lens Iris so that the Video signal level becomes 300 mV as shown in Fig. 5-1-26.

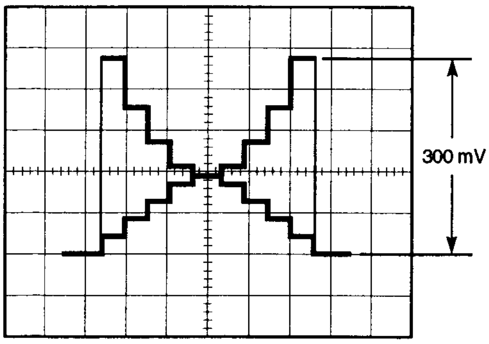


Fig. 5-1-26

- Change the Oscilloscope to TP103.
- Adjust VR104 so that the Video signal level becomes 700 ± 10 mV as shown in Fig. 5-1-27.
- Change the Oscilloscope to TP203.
- Adjust VR204 so that the Video signal level becomes 700 ± 10 mV as shown in Fig. 5-1-27.
- Change the Oscilloscope to TP303.
- Adjust VR304 so that the Video signal level becomes 700 ± 10 mV as shown in Fig. 5-1-27.

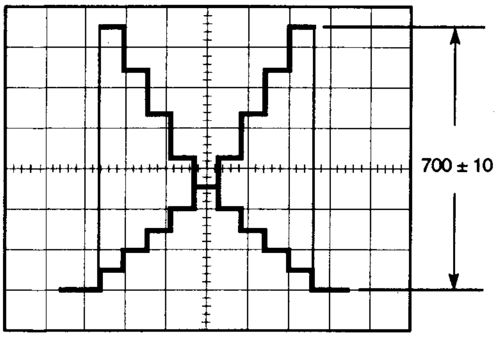


Fig. 5-1-27

(16) Gamma Adjustment

Test Point:	**TP201 (G IN)**	**Preprocess Board**
	TP106 (R GAMMA)	**Preprocess Board**
	TP206 (G GAMMA)	**Preprocess Board**
	TP306 (B GAMMA)	**Preprocess Board**
Adjust:	**VR110 (R GAMMA MIN)**	**Preprocess Board**
	VR108 (R GAMMA MAX)	**Preprocess Board**
	VR109 (R CROSS)	**Preprocess Board**
	VR107 (R KNEE)	**Preprocess Board**
	VR210 (G GAMMA MIN)	**Preprocess Board**
	VR208 (G GAMMA MAX)	**Preprocess Board**
	VR209 (G CROSS)	**Preprocess Board**
	VR207 (G KNEE)	**Preprocess Board**
	VR310 (B GAMMA MIN)	**Preprocess Board**
	VR308 (B GAMMA MAX)	**Preprocess Board**
	VR309 (B CROSS)	**Preprocess Board**
	VR307 (B KNEE)	**Preprocess Board**

- Aim the Camera at the Logarithmic Gray Scale Chart.
- Connect the Oscilloscope to TP201.
- Set the Lens Iris so that the Video signal level becomes 300 mV as shown in Fig. 5-1-28.

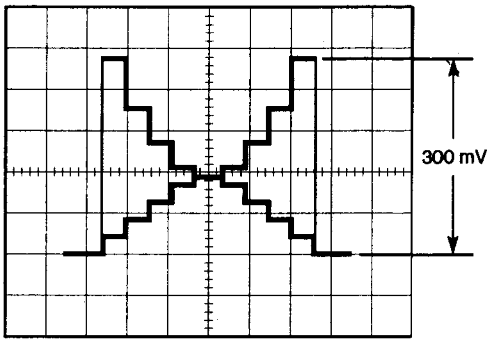


Fig. 5-1-28

- Set VR107, VR207 and VR307 so that Knee does not effect.
- Set VR109, VR209 and VR309 to minimum ($\gamma = 1$).
- Change the Oscilloscope to TP106.
- Adjust VR110 so that the Video signal level becomes 1.44 V ± 10 mV as shown in Fig. 5-1-29.
- Change the Oscilloscope to TP206.
- Adjust VR210 so that the Video signal level becomes 1.44 V ± 10 mV as shown in Fig. 5-1-29.
- Change the Oscilloscope to TP306.
- Adjust VR310 so that the Video signal level becomes 1.44 V ± 10 mV as shown in Fig. 5-1-29.

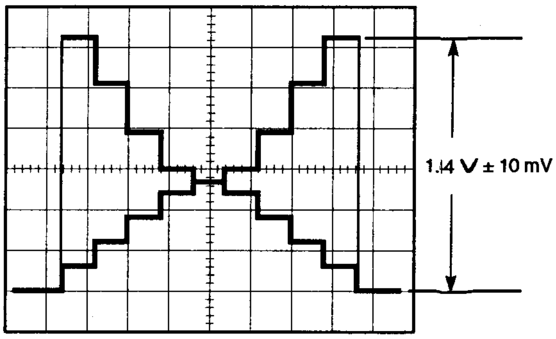


Fig. 5-1-29

- Set VR109, VR209 and VR309 to maximum ($\gamma = 0.4$).
- Change the Oscilloscope to TP106.
- Adjust VR108 so that the Video signal level becomes 1.44 V ± 10 mV as shown in Fig. 5-1-30.
- Change the Oscilloscope to TP206.
- Adjust VR208 so that the Video signal level becomes 1.44 V ± 10 mV as shown in Fig. 5-1-30.
- Change the Oscilloscope to TP306.
- Adjust VR308 so that the Video signal level becomes 1.44 V ± 10 mV as shown in Fig. 5-1-30.

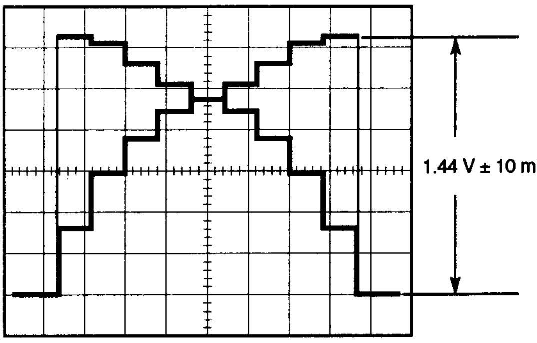


Fig. 5-1-30

- Repeat adjust between $\gamma = 1$ and $\gamma = 0.4$ so that the Video signal level does not changed.

(17) Pedestal Coarse Adjustment

Test Point: **VIDEO OUT CONNECTOR** **Rear Panel**

Adjust:	**VR106 (R PED)**	**Preprocess Board**
	VR206 (G PED)	**Preprocess Board**
	VR306 (B PED)	**Preprocess Board**

- Cap on the Lens.
- Adjust VR106 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-31.
- Adjust VR206 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-31.
- Adjust VR306 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-31.

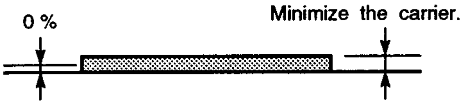


Fig. 5-1-31

(18) Cross Point Adjustment

Test Point: **VIDEO OUT CONNECTOR** **Rear Panel**

Adjust:	**VR109 (R CROSS)**	**Preprocess Board**
	VR209 (G CROSS)	**Preprocess Board**
	VR309 (B CROSS)	**Preprocess Board**

- Aim the Camera at the Logarithmic Gray Scale Chart.
- Adjust VR109 so that the Cross Point level of the Gray Scale becomes 57 ± 2 % and the carrier becomes minimum as shown in Fig. 5-1-32.
- Adjust VR209 so that the Cross Point level of the Gray Scale becomes 57 ± 2 % and the carrier becomes minimum as shown in Fig. 5-1-32.
- Adjust VR309 so that the Cross Point level of the Gray Scale becomes 57 ± 2 % and the carrier becomes minimum as shown in Fig. 5-1-32.

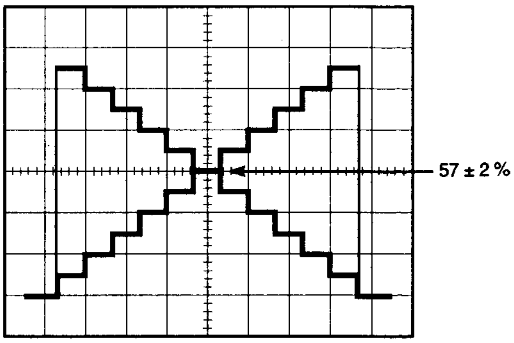


Fig. 5-1-32

(19) Pulse Cancel and Pedestal Adjustment

Test Point: **VIDEO OUT CONNECTOR** **Rear Panel**

Adjust:	**VR103 (R PULSE CANCEL)**	**Preprocess Board**
	VR106 (R PED)	**Preprocess Board**
	VR203 (G PULSE CANCEL)	**Preprocess Board**
	VR206 (G PED)	**Preprocess Board**
	VR303 (B PULSE CANCEL)	**Preprocess Board**
	VR306 (B PED)	**Preprocess Board**

- Press the **PAGE** switch more than 3 seconds, then set the **GAIN** to **18dB**.
- Cap on the Lens.
- Adjust VR103 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-33.
- Adjust VR203 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-33.
- Adjust VR303 so that the Pedestal level becomes 7.5 % and the carrier becomes minimum as shown in Fig. 5-1-33.
- Set the **GAIN** to **0dB**.
- Adjust VR106 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-33.
- Adjust VR206 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-33.
- Adjust VR306 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-33.

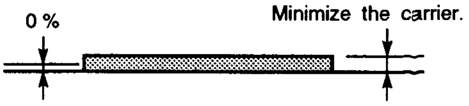


Fig. 5-1-33

- Repeat adjust between the **0dB** Gain and **18dB** Gain so that the Pedestal level does not change.

(20) Shutter Pulse Cancel Coarse Adjustment

Test Point: **VIDEO OUT CONNECTOR** **Rear Panel**
Adjust: **VR102 (R SHUTTER)** **Preprocess Board**
VR202 (G SHUTTER) **Preprocess Board**
VR302 (B SHUTTER) **Preprocess Board**

- Press the **PAGE** switch more than 3 seconds, then set the **GAIN** to **18dB** and the **SHUTTER** to **1/100**, the menu as shown in Table 5-1-7 will be displayed.

```
** SETUP **
GAIN          18DB
IRIS          MANU
SHUTTER       1/100
WHITE BAL     ATW
DTL LEVEL     OFF
SCENE FILE    USER A

INIT   USER   END
```

Table 5-1-7

- Cap on the Lens.
- Adjust VR102 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-34.
- Adjust VR202 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-34.
- Adjust VR302 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-34.

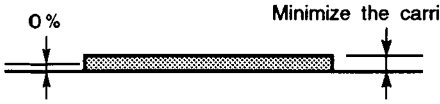


Fig. 5-1-34

- Repeat adjust between the **0dB** Gain and **18dB** Gain so that the Pedestal level does not change.

(21) Input Gain Fine Adjustment

Test Point: **TP201 (G IN)** **Preprocess Board**
TP102 (R GAIN-1) **Preprocess Board**
TP202 (G GAIN-1) **Preprocess Board**
TP302 (B GAIN-1) **Preprocess Board**
Adjust: **VR101 (R GAIN-1)** **Preprocess Board**
VR201 (G GAIN-1) **Preprocess Board**
VR301 (B GAIN-1) **Preprocess Board**

- Press the **PAGE** switch more than 3 seconds, then set the **GAIN** to **0dB**.
- Aim the Camera at the Logarithmic Gray Scale Chart.
- Connect the Oscilloscope to TP201.
- Set the Lens Iris so that the Video signal level becomes 300 mV as shown in Fig. 5-1-35.

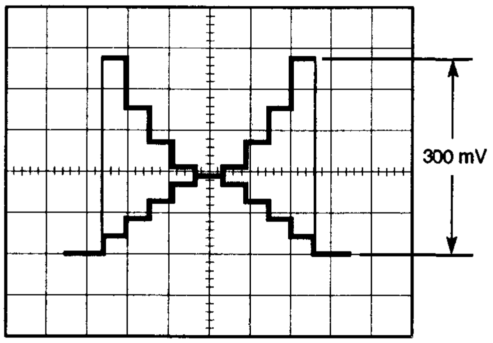


Fig. 5-1-35

- Change the Oscilloscope to TP102.
- Adjust VR101 so that the Video signal level becomes 700 ± 10 mV as shown in Fig. 5-1-36.
- Change the Oscilloscope to TP202.
- Adjust VR201 so that the Video signal level becomes 700 ± 10 mV as shown in Fig. 5-1-36.
- Change the Oscilloscope to TP302.
- Adjust VR301 so that the Video signal level becomes 700 ± 10 mV as shown in Fig. 5-1-36.

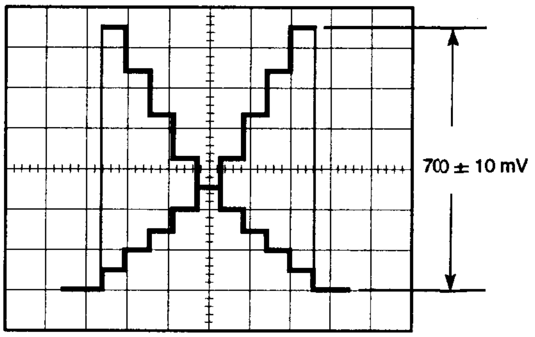


Fig. 5-1-36

(22) Superposition Shading Adjustment

- Press the **PAGE** switch more than 3 seconds, then set the **GAIN** to **18dB**.
- Cap on the Lens.

(22)-1 H Top Shading Adjustment

Test Point: **TP106 (R GAMMA)** **Preprocess Board**
TP206 (G GAMMA) **Preprocess Board**
TP306 (B GAMMA) **Preprocess Board**
Adjust: **VR1 (H TOP SHADING)** **Preprocess Board**
VR5 (R H TOP SHADING) **Preprocess Board**
VR9 (G H TOP SHADING) **Preprocess Board**
VR13 (B H TOP SHADING) **Preprocess Board**

- Connect the Oscilloscope to TP206 and triggered at H rate.

- Adjust VR9 so that the shading portion level becomes flat level as shown in Fig. 5-1-37.
- Adjust VR1 so that the H Top portion becomes flat level.
- Change the Oscilloscope to TP106 and triggered at H rate.
- Adjust VR5 so that the shading portion level becomes flat level as shown in Fig. 5-1-37.
- Change the Oscilloscope to TP306 and triggered at H rate.
- Adjust VR13 so that the shading portion level becomes flat level as shown in Fig. 5-1-37.

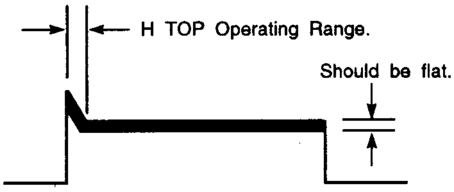


Fig. 5-1-37

- Set VR1 becomes minimum position of the effective range of the resistance.
  Note: Do not set non-resistance area of VR1.

(22)-2 V Top Shading Adjustment

Test Point:	**TP106 (R GAMMA)**	**Preprocess Board**
	TP206 (G GAMMA)	**Preprocess Board**
	TP306 (B GAMMA)	**Preprocess Board**
Adjust:	**VR2 (V TOP SHADING)**	**Preprocess Board**
	VR6 (R V TOP SHADING)	**Preprocess Board**
	VR10 (G V TOP SHADING)	**Preprocess Board**
	VR14 (B V TOP SHADING)	**Preprocess Board**

- Connect the Oscilloscope to TP206 and triggered at V rate.
- Adjust VR10 so that the shading portion level becomes flat level as shown in Fig. 5-1-38.
- Adjust VR2 so that the V Top portion becomes flat level.
- Change the Oscilloscope to TP106 and triggered at V rate.
- Adjust VR6 so that the shading portion level becomes flat level as shown in Fig. 5-1-38.
- Change the Oscilloscope to TP306 and triggered at V rate.
- Adjust VR14 so that the shading portion level becomes flat level as shown in Fig. 5-1-38.

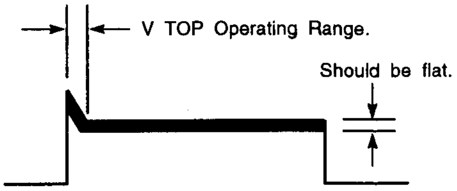


Fig. 5-1-38

- Set VR2 becomes minimum position of the effective range of the resistance.
  Note: Do not set non-resistance area of VR2.

(22)-3 H Shading (SAW) Adjustment

Test Point:	**TP106 (R GAMMA)**	**Preprocess Board**
	TP206 (G GAMMA)	**Preprocess Board**
	TP306 (B GAMMA)	**Preprocess Board**
Adjust:	**VR3 (R H SHADING (SAW))**	**Preprocess Board**
	VR7 (G H SHADING (SAW))	**Preprocess Board**
	VR11 (B H SHADING (SAW))	**Preprocess Board**

- Connect the Oscilloscope to TP106 and triggered at H rate.
- Adjust VR3 so that the shading portion level becomes flat level as shown in Fig. 5-1-39.
- Change the Oscilloscope to TP206 and triggered at H rate.
- Adjust VR7 so that the shading portion level becomes flat level as shown in Fig. 5-1-39.
- Change the Oscilloscope to TP306 and triggered at H rate.
- Adjust VR11 so that the shading portion level becomes flat level as shown in Fig. 5-1-39.

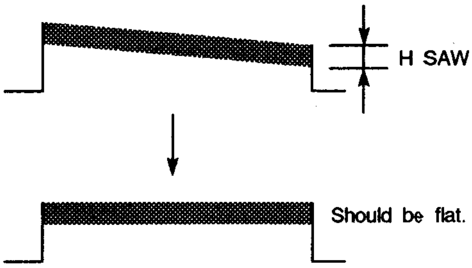


Fig. 5-1-39

(22)-4 V Shading (SAW) Adjustment

Test Point:	**TP106 (R GAMMA)**	**Preprocess Board**
	TP206 (G GAMMA)	**Preprocess Board**
	TP306 (B GAMMA)	**Preprocess Board**
Adjust:	**VR4 (R V SHADING (SAW))**	**Preprocess Board**
	VR8 (G V SHADING (SAW))	**Preprocess Board**
	VR12 (B V SHADING (SAW))	**Preprocess Board**

- Connect the Oscilloscope to TP106 and triggered at V rate.
- Adjust VR4 so that the shading portion level becomes flat level as shown in Fig. 5-1-40.
- Change the Oscilloscope to TP206 and triggered at V rate.
- Adjust VR8 so that the shading portion level becomes flat level as shown in Fig. 5-1-40.
- Change the Oscilloscope to TP306 and triggered at V rate.
- Adjust VR12 so that the shading portion level becomes flat level as shown in Fig. 5-1-40.

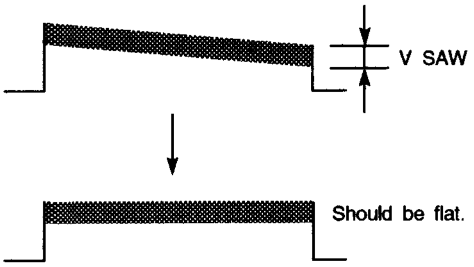


Fig. 5-1-40

(23) Pedestal Fine Adjustment

Test Point:	**VIDEO OUT CONNECTOR**	**Rear Panel**
Adjust:	**VR103 (R PULSE CANCEL)**	**Preprocess Board**
	VR106 (R PED)	**Preprocess Board**
	VR203 (G PULSE CANCEL)	**Preprocess Board**
	VR206 (G PED)	**Preprocess Board**
	VR303 (B PULSE CANCEL)	**Preprocess Board**
	VR306 (B PED)	**Preprocess Board**

- Press the **PAGE** switch more than 3 seconds, then set the **GAIN** to **0dB**.
- Cap on the Lens.
- Adjust VR106 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-41.
- Adjust VR206 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-41.
- Adjust VR306 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-41.
- Set the **GAIN** to **18dB**.
- Adjust VR103 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-41.
- Adjust VR203 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-41.
- Adjust VR303 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-41.

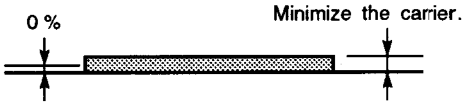


Fig. 5-1-41

- Repeat adjust between the **0dB** Gain and **18dB** Gain so that the Pedestal level does not change.

(24) Shutter Pulse Cancel Fine Adjustment

Test Point:	**VIDEO OUT CONNECTOR**	**Rear Panel**
Adjust:	**VR102 (R SHUTTER)**	**Preprocess Board**
	VR202 (G SHUTTER)	**Preprocess Board**
	VR302 (B SHUTTER)	**Preprocess Board**

- Press the **PAGE** switch more than 3 seconds, then set the **GAIN** to **18dB** and the **SHUTTER** to **1/100**
- Cap on the Lens.
- Adjust VR102 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-42.
- Adjust VR202 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-42.
- Adjust VR302 so that the Pedestal level becomes 0 % and the carrier becomes minimum as shown in Fig. 5-1-42.

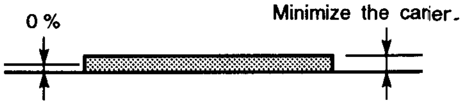


Fig. 5-1-42

- Repeat adjust between the **0dB** Gain and **18dB** Gain so that the Pedestal level does not change.
- After adjustment, set the **GAIN** to **0dB** and the **SHUTTER** to **OFF**.

(25) 0dB/18dB Gain Adjustment

Test Point:	**TP201 (G IN)**	**Preprocess Board**
	TP103 (R GAIN-2)	**Preprocess Board**
	TP203 (G GAIN-2)	**Preprocess Board**
	TP303 (B GAIN-2)	**Preprocess Board**
Adjust:	**VR104 (R GAIN-2)**	**Preprocess Board**
	VR105 (R 18dB GAIN)	**Preprocess Board**
	VR204 (G GAIN-2)	**Preprocess Board**
	VR205 (G 18dB GAIN)	**Preprocess Board**
	VR304 (B GAIN-2)	**Preprocess Board**
	VR305 (B 18dB GAIN)	**Preprocess Board**

- Aim the Camera at the Logarithmic Gray Scale Chart.
- Connect the Oscilloscope to TP201.
- Set the Lens Iris so that the Video signal level becomes 300 mV as shown in Fig. 5-1-43.

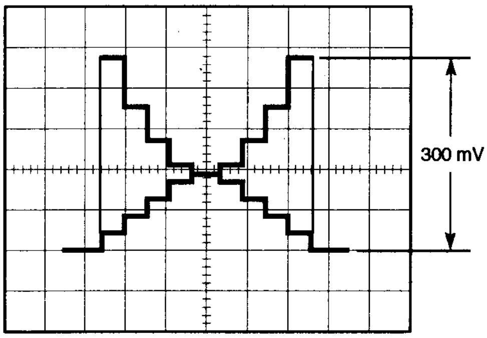


Fig. 5-1-43

- Press the **PAGE** switch more than 3 seconds, then set the **GAIN** to **0dB**.
- Change the Oscilloscope to TP203.
- Confirm that the Video signal level becomes 700 ± 10 mV as shown in Fig. 5-1-44.
  If not, readjust VR204.
- Change the Oscilloscope to TP103.
- Confirm that the Video signal level becomes 700 ± 10 mV as shown in Fig. 5-1-44.
  If not, readjust VR104.
- Change the Oscilloscope to TP303.
- Confirm that the Video signal level becomes 700 ± 10 mV as shown in Fig. 5-1-44.
  If not, readjust VR304.
- Mount the ND-8 Filter on the Lens.
- Change the Oscilloscope to TP203.
- Set the **GAIN** to **18dB**.
- Adjust VR205 so that the Video signal level becomes 700 ± 10 mV as shown in Fig. 5-1-44.
- Remove the ND-8 Filter.
- Confirm that the Video signal becomes 700 ± 10mV as shown in Fig. 5-1-44.
  If not readjust VR204.
- Repeat adjustment between **0dB** Gain and **18dB** Gain until satisfactory.
- Set the **GAIN** to **18dB**.
- Change the Oscilloscope to TP203.
- Set the Lens Iris so that the Video signal level becomes 700± 10 mV as shown in Fig. 5-1-44.
- Change the Oscilloscope to TP103.
- Confirm that the Video signal becomes 700 ± 10mV as shown in Fig. 5-1-44.
  If not readjust VR105.
- Repeat adjustment between **0dB** Gain and **18dB** Gain until satisfactory.
- Change the Oscilloscope to TP303.
- Confirm that the Video signal becomes 700 ± 10mV, if not readjust VR305.
- Repeat adjust between **0dB** Gain and **18dB** Gain until satisfactory.

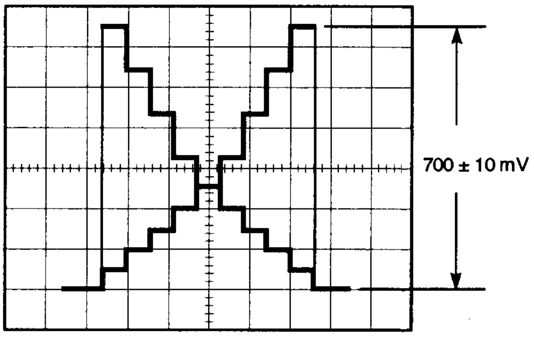


Fig. 5-1-44

(26) White Balance Adjustment

Test Point:	**VIDEO OUT CONNECTOR**	**Rear Panel**
Adjust:	**VR111 (2000°K WB)**	**Preprocess Board**
	VR311 (10000°K WB)	**Preprocess Board**

- Press the **UP (ABC)** switch on the Rear Panel.
- Set the Colour Temperature of the Lighting to 3,200 °K.
- Press the **ITEM (AWC)** switch.
- Set the Gain Control of the Vectorscope to maximum.
- Confirm that the vector positions at the center of the Vectorscope.
- Change the Colour Temperature of the Lighting to 2,000 °K.
- Press the **ITEM (AWC)** switch.
- Adjust VR111 so that the vector positions at the center of the Vectorscope as shown in Fig. 5-1-45.
- Change the Colour Temperature of the Lighting to 10,000 °K.
- Press the **ITEM (AWC)** switch.
- Adjust VR311 so that the vector positions at the center of the Vectorscope as shown in Fig. 5-1-45.

Positions at Center.

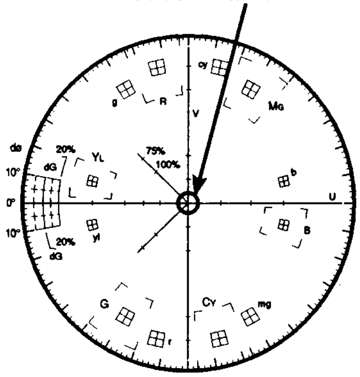


Fig. 5-1-45

(27) Knee Adjustment

Test Point:	**VIDEO OUT CONNECTOR**	**Rear panel**
	TP203 (G GAIN-2)	**Preprocess Board**
Adjust:	**VR107 (R KNEE)**	**Preprocess Board**
	VR207 (G KNEE)	**Preprocess Board**
	VR307 (B KNEE)	**Preprocess Board**

- Set the Colour Temperature of the Lighting to 3,200 °K.
- Aim the Camera at the Logarithmic Gray Scale Chart.
- Connect the Oscilloscope to TP203.
- Set the Lens Iris so that the Video signal level becomes 100 %.
- Press the **PAGE** switch more than 3 seconds, then set the **GAIN** to **0dB**.
- Set the **GAIN** to **9dB**.
- Set the Gain Control of the Vectorscope to maximum.
- Adjust VR107 so that the vector positions at the center of the Vectorscope as shown in Fig. 5-1-46.
- Adjust VR207 so that the vector positions at the center of the Vectorscope as shown in Fig. 5-1-46.
- Adjust VR307 so that the vector positions at the center of the Vectorscope as shown in Fig. 5-1-46.

Positions at Center.

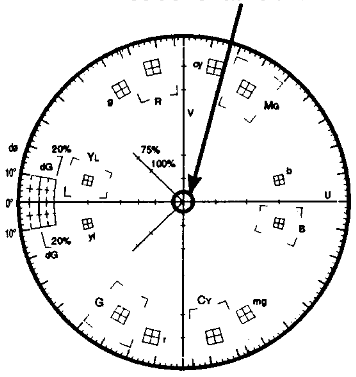


Fig. 5-1-46

- Set the **GAIN** to **0DB**.
- Open the Lens Iris one click (1F step).
- Confirm that the vector positions at the center of the Vectorscope.

5.2. Adjustment Procedure for WV-PS550

Refer to the Location of the Test Points and Adjusting Controls on page 62.

(1) 89.0V Adjustment

Test Point:	**TP1 (89.0V)**	**Power Board**
Adjustment:	**VR1 (89.0V)**	**Power Board**

- Connect the Digital Voltmeter to TP1 .
- Adjust VR1 to obtain 89.0 ± 0.1V.

■ When adjsting the Modulator Board, use Extension Board (Part No. : YWV0EA0158AN) as shown in page 39.

(2) Video Gain 1 Adjustment

Test Point:	**TP1 (VIDEO)**	**Modulator Board**
Adjust:	**VR1 (VIDEO GAIN)**	**Modulator Board**

- Connect the Oscilloscope to TP1.
- Trigger the Oscilloscope at H rate.
- Adjust VR1 so that the Video signal level becomes 0.8 ± 0.01 Vp-p as shown in the Fig. 5-2-1.

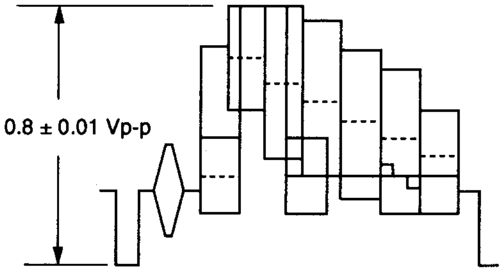


Fig. 5-2-1

(3) Video Gain 2 Adjustment

Test Point:	**TP10 (MPX)**	**Modulator Board**
Adjust:	**VR2 (MPX GAIN)**	**Modulator Board**

- Connect the Oscilloscope to TP10.
- Trigger the Oscilloscope at H rate.
- Adjust VR2 so that the Video signal level becomes 3.0 ± 0.05 Vp-p as shown in the Fig. 5-2-2.

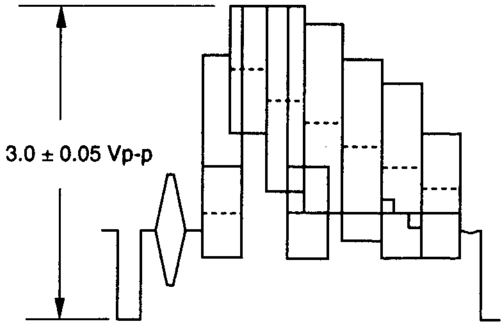


Fig. 5-2-2

(4) Command Modulation Adjustment

Test Point: **TP10 (MPX)** **Modulator Board**

Adjust: **VR5 (COMMAND CARRIER-1)** **Modulator Board**

VR6 (COMMAND CARRIER-2) **Modulator Board**

- Connect the Oscilloscope to TP10.
- Trigger the Oscilloscope at V rate.
- Set VR5 to its mechanical center position and VR3 to fully clockwise.
- Adjust VR6 so that the carrier on the signal becomes minimum as shown in the Fig. 5-2-3.

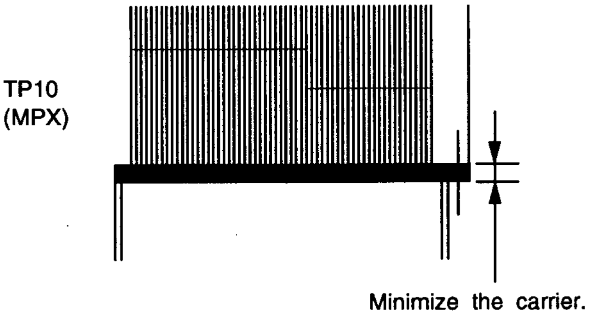


Fig. 5-2-3

(5) Command Level Adjustment

Test Point: **TP10 (MPX)** **Modulator Board**

Adjust: **VR3 (COMMAND LEVEL)** **Modulator Board**

- Connect the Oscilloscope to TP10.
- Trigger the Oscilloscope at V rate.
- Adjust VR3 so that the carrier on the Command signal becomes 0.5 ± 0.01 Vp-p as shown in the Fig. 5-2-4.

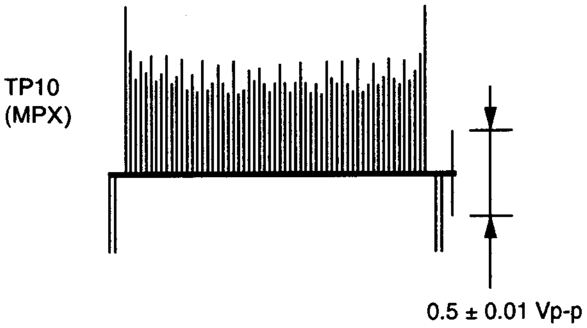


Fig. 5-2-4

(6) AGC Pulse Adjustment

Test Point: **TP3 (V-SYNC)** **Modulator Board**

TP4 (AGC PULSE) **Modulator Board**

Adjust: **VR4 (AGC PULSE PHASE)** **Modulator Board**

VR11 (AGC PULSE WIDTH) **Modulator Board**

- Connect CH1 of the Oscilloscope to TP3 and CH2 of the Oscilloscope to TP4, and set dual display mode.
- Trigger the Oscilloscope at V rate.
- Expand the AGC Pulse period on the Oscilloscope.
- Adjust VR4 so that the AGC Pulse Phase becomes 200 ± 5 µsec. as shown in the Fig. 5-2-5.
- Adjust VR11 so that the AGC Pulse Width becomes 100 ± 5 µsec. as shown in the Fig. 5-2-5.

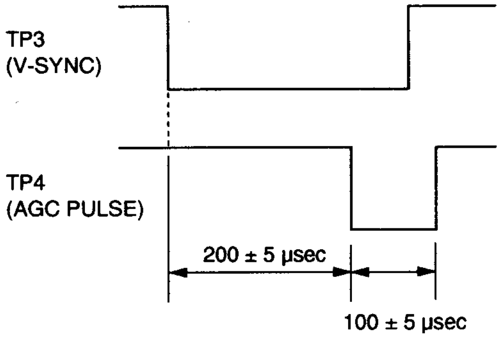


Fig. 5-2-5

(7) AGC Cancel Adjustment

Test Point: **TP3 (V-SYNC)** **Modulator Board**

TP5 (AGC CANCEL) **Modulator Board**

Adjust: **VR7 (AGC CANCEL)** **Modulator Board**

- Connect CH1 of the Oscilloscope to TP3 and CH2 of the Oscilloscope to TP5, and set dual display mode.
- Trigger the Oscilloscope at V rate.
- Expand the AGC Cancel signal period on the Oscilloscope.
- Adjust VR7 so that the AGC Cancel signal phase becomes 340 ± 5 µsec. as shown in the Fig. 5-2-6.

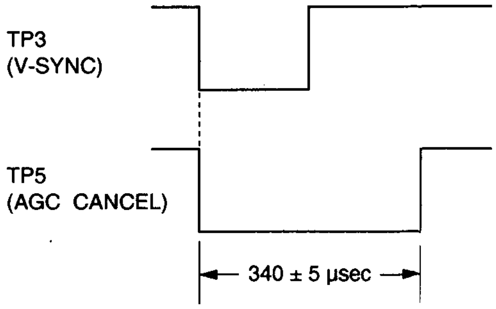


Fig. 5-2-6

(8) Data Cancel Pulse Adjustment

Test Point: **TP3 (V-SYNC)** **Modulator Board**
TP6 (DATA CANCEL) **Modulator Board**
Adjust: **VR8 (DATA CANCEL)** **Modulator Board**

- Connect two probes of the Oscilloscope to TP3 and TP6, and set dual display mode.
- Trigger the Oscilloscope at V rate.
- Expand the Data Cancel Pulse period on the Oscilloscope.
- Adjust VR8 so that the Data Cancel Pulse Phase becomes 100 ± 5 µsec. as shown in the Fig. 5-2-7.

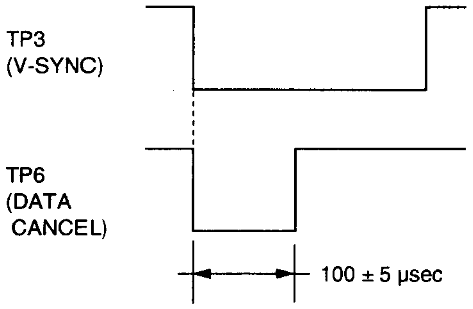


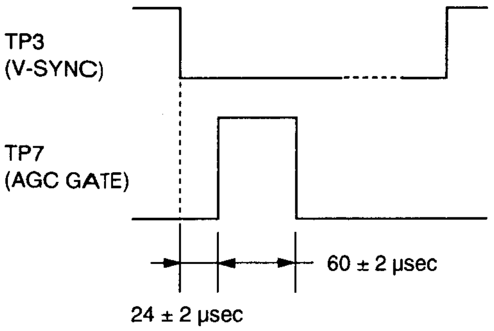
Fig. 5-2-7

(9) AGC Gate Pulse Adjustment

Test Point: **TP3 (V-SYNC)** **Modulator Board**
TP7 (AGC GATE) **Modulator Board**
Adjust: **VR9 (AGC GATE PHASE)**
Modulator Board
VR10 (AGC PULSE) **Modulator Board**

- Connect two probes of the Oscilloscope to TP3 and TP7, and set dual display mode.
- Trigger the Oscilloscope at V rate.
- Expand the AGC Gate period on the Oscilloscope.
- Adjust VR9 so that the AGC Gate Pulse Phase becomes 24 ± 2 µsec. as shown in the Fig. 5-2-8.
- Adjust VR10 so that the AGC Gate Pulse Width becomes 60 ± 2 µsec. as shown in the Fig. 5-2-8.

Fig. 5-2-8



(10) Confirmation of 17 MHz Carrier Level

Test Point: **TP8 (17MHz)** **Modulator Board**

- Connect the Oscilloscope to TP8.
- Confirm that the 17MHz Carrier level becomes 800 mV p-p as shown in the Fig. 5-2-9.

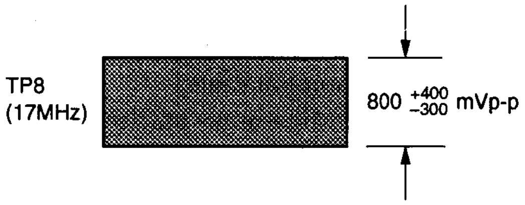


Fig. 5-2-9

■ When adjsting the Demodulator Board, use Extension Board (Part No. : YWV0EA0158AN) as shown in page 39.

(11) Command AGC Pulse Adjustment

Test Point: **TP5 (COMMAND AGC)**
Demodulator Board
Adjust: **VR4 (COMMAND LEVEL)**
Demodulator Board

- Connect the Oscilloscope to TP5.
- Adjust VR4 so that the Command level of the first AGC signal becomes 0.45 ± 0.01 Vp-p as shown in the Fig. 4-2-10.

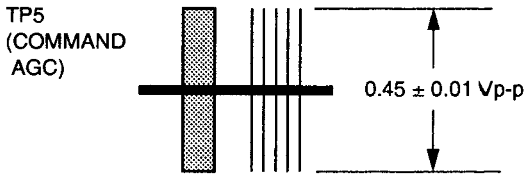


Fig. 4-2-10

(12) Confirmation of Command AGC DC Level

Test Point: **TP6 (COMMAND AGC DC)**
Demodulator Board

- Connect the Oscilloscope to TP6.
- Set the Oscilloscope to DC mode.
- Confirm that the DC level of the Command AGC DC signal becomes less than 2.5 V DC as shown in the Fig. 4-2-11.

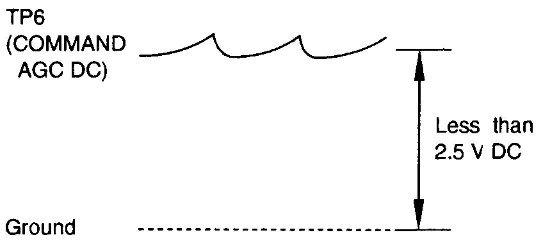


Fig. 4-2-11

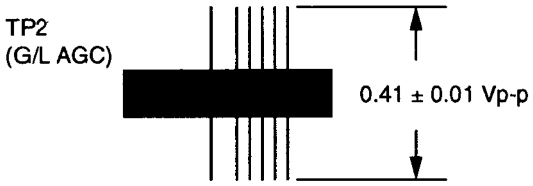
13) G/L AGC Level Adjustment

Test Point: TP2 (G/L AGC) **Demodulator Board**

Adjust: VR1 (G/L LEVEL) **Demodulator Board**

- Supply the Black Burst signal or Colour Bar signal to the Gen-Lock Input Connector of the WV-RC700A.
- Connect the Oscilloscope to TP2.
- Adjust VR1 so that the Command level of the Gen-Lock signal becomes 0.41 ± 0.01 Vp-p as shown in the Fig. 4-2-12.

Fig. 4-2-12



(14) Confirmation of G/L AGC DC Level

Test Point: TP3 (G/L AGC DC) **Demodulator Board**

- Connect the Oscilloscope to TP3.
- Set the Oscilloscope to DC mode.
- Confirm that the DC level of the G/L AGC signal becomes less than 3.0 V DC as shown in the Fig. 4-2-13.

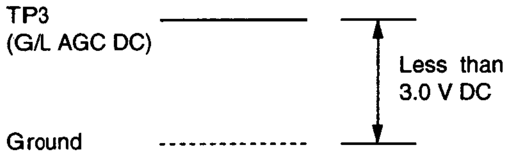


Fig. 4-2-13

(15) G/L Sync Level Adjustment

Test Point: Pin 22 (GEN-LOCK OUT) **Extension Board**

Adjust: VR2 (G/L SYNC LEVEL) **Demodulator Board**

- Supply the Black Burst signal or Colour Bar signal to the Gen-Lock Input Connector of the WV-RC700A.
- Connect the Oscilloscope to Pin 22 on the Extension Board.
- Adjust VR2 so that the Sync level of the Gen-Lock signal becomes 0.5 ± 0.02 Vp-p as shown in the Fig. 4-2-14.

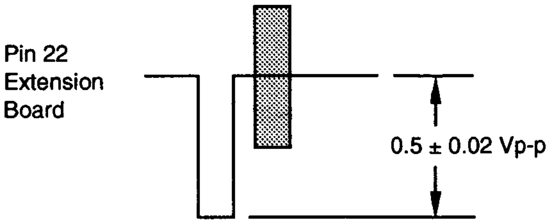


Fig. 4-2-14

(16) G/L Burst Level Adjustment

Test Point: Pin 22 (GEN-LOCK OUT) **Extension Board**

Adjust: CT1 (G/L DOM) **Demodulator Board**
VR3 (G/L BURST LEVEL) **Demodulator Board**

- Supply the Black Burst signal or Colour Bar signal to the Gen-Lock Input Connector of the WV-RC700A.
- Connect the Oscilloscope to Pin 22 on the Extension Board.
- Adjust CT1 so that the Burst level of the Gen-Lock signal becomes maximum.
- Adjust VR3 so that the Burst level of the Gen-Lock signal becomes 0.5 ± 0.02 Vp-p as shown in the Fig. 4-2-15.

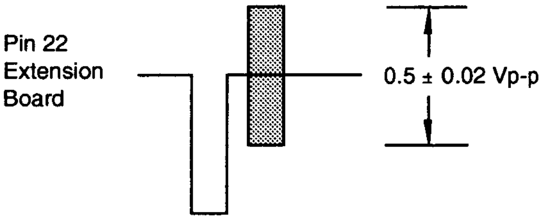


Fig. 4-2-15

■ **Before start to adjust the Audio Board, two switches on the Audio board are as follows:**

SW1: Audio position
SW2: ON position

(17) 11.2MHz Adjustment

Test Point: TP2 (11.2MHz) **Audio Board**

Adjust: L2 (11.2MHz) **Audio Board**

- Connect the Oscilloscope to TP2.
- Adjust L2 so that the carrier level becomes maximum.
- Connect the Frequency Counter to TP2.
- Adjust L2 so that the carrier frequency becomes 11.202 ± 0.001 MHz.

(18) Modulator DC Level Adjustment

Test Point:	**TP3 (5.0V)**	**Audio Board**
Adjust:	**L3 (5.0V)**	**Audio Board**

- Connect the Digital Voltmeter to TP3.
- Adjust L3 to obtain 5.0 ± 0.1 V.

(19) Intercom MPX Carrier Adjustment

Test Point:	**TP10 (MPX)**	**Modulator Board**
Adjust:	**VR1 (MPX CARRIER)**	**Audio Board**

- Set SW2 on the Audio Board to ON.
- Connect the Oscilloscope to TP10 on the Modulator Board.
- Adjust VR1 so that the carrier level becomes 0.6 ± 0.05 Vp-p as shown in the Fig. 4-2-16.

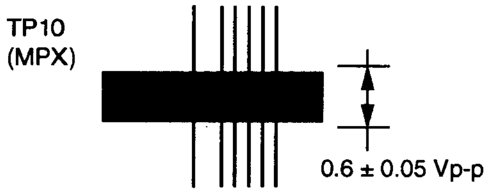
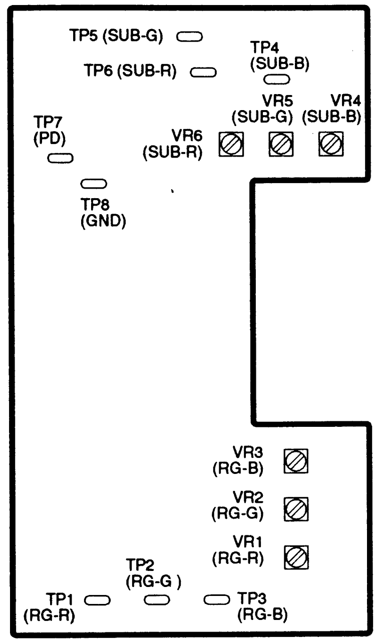


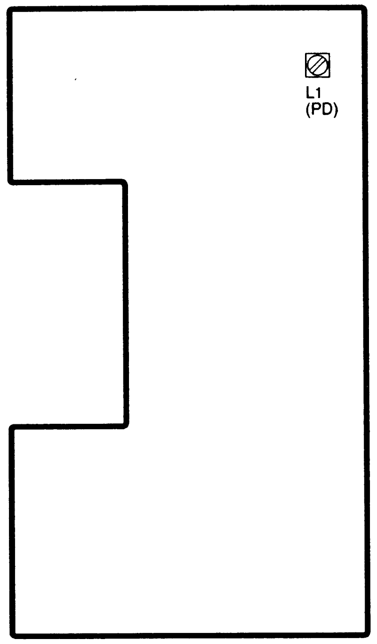
Fig. 4-2-16

LOCATION OF TEST POINTS AND ADJUSTING CONTROLS (WV-E550E)

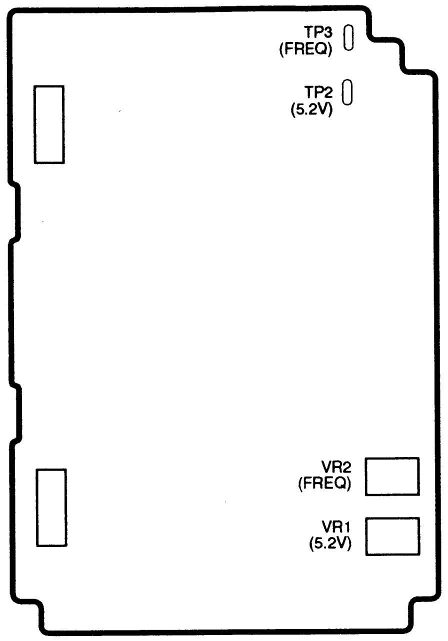
DRIVE BOARD (PATTERN SIDE)


TP5 (SUB-G)
TP6 (SUB-R)
TP4 (SUB-B)
VR5 (SUB-G)
VR4 (SUB-B)
TP7 (PD)
VR6 (SUB-R)
TP8 (GND)
VR3 (RG-B)
VR2 (RG-G)
VR1 (RG-R)
TP2 (RG-G)
TP1 (RG-R)
TP3 (RG-B)

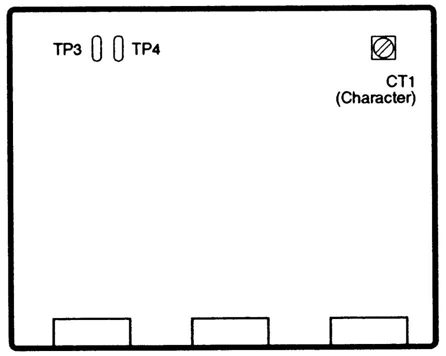
DRIVE BOARD (COMPONENT SIDE)



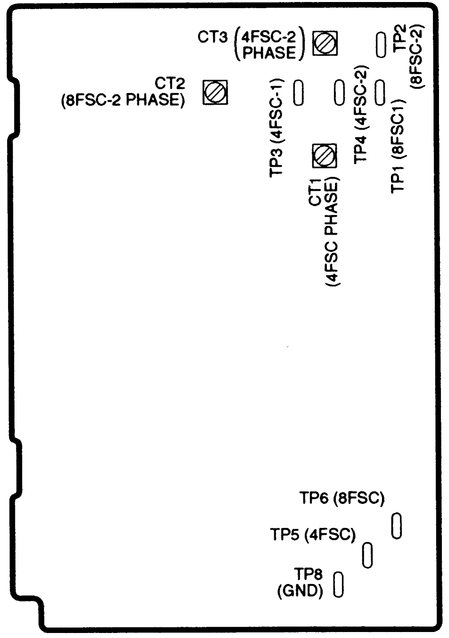
POWER BOARD (PATTERN SIDE)


TP3 (FREQ)
TP2 (5.2V)
VR2 (FREQ)
VR1 (5.2V)

SYSTEM CONTROL BOARD (PATTERN SIDE)

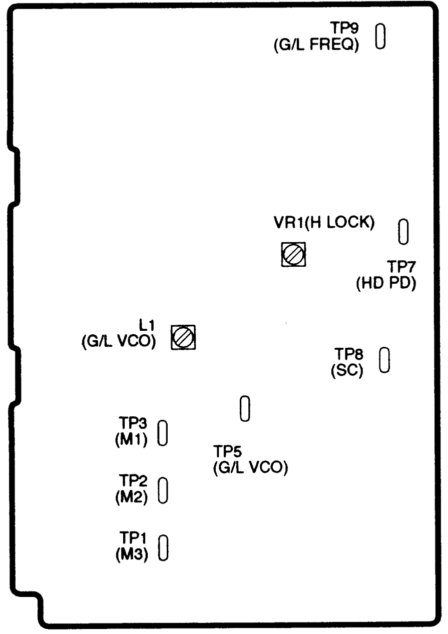

TP3
TP4
CT1 (Character)

DIGITAL PROCESS BOARD (COMPONENT SIDE)

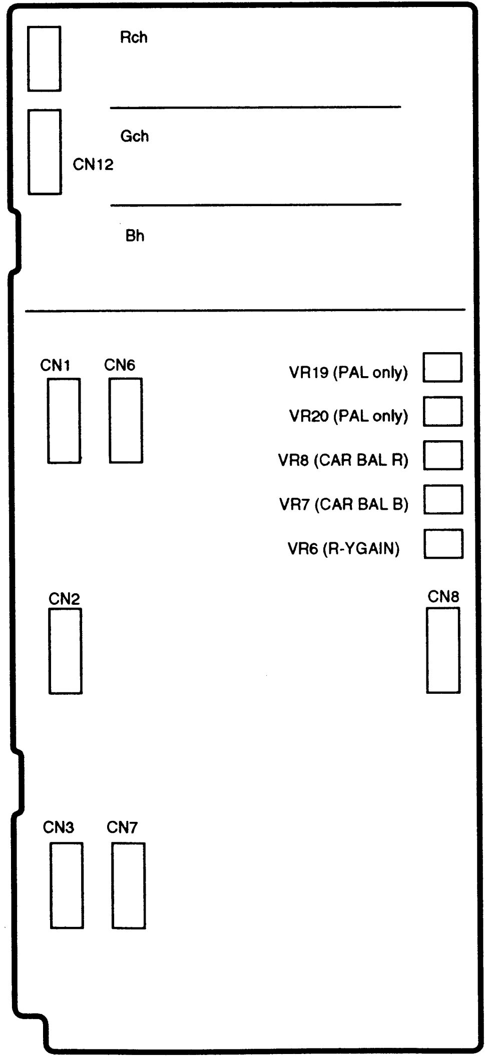

CT3 (4FSC-2 PHASE)
TP2 (8FSC-2)
CT2 (8FSC-2 PHASE)
TP3 (4FSC-1)
TP4 (4FSC-2)
TP1 (8FSC1)
CT1 (4FSC PHASE)
TP6 (8FSC)
TP5 (4FSC)
TP8 (GND)

(DATACAN
(AGC G
(AGC CAN
(AGC GATE WI
PO
(C

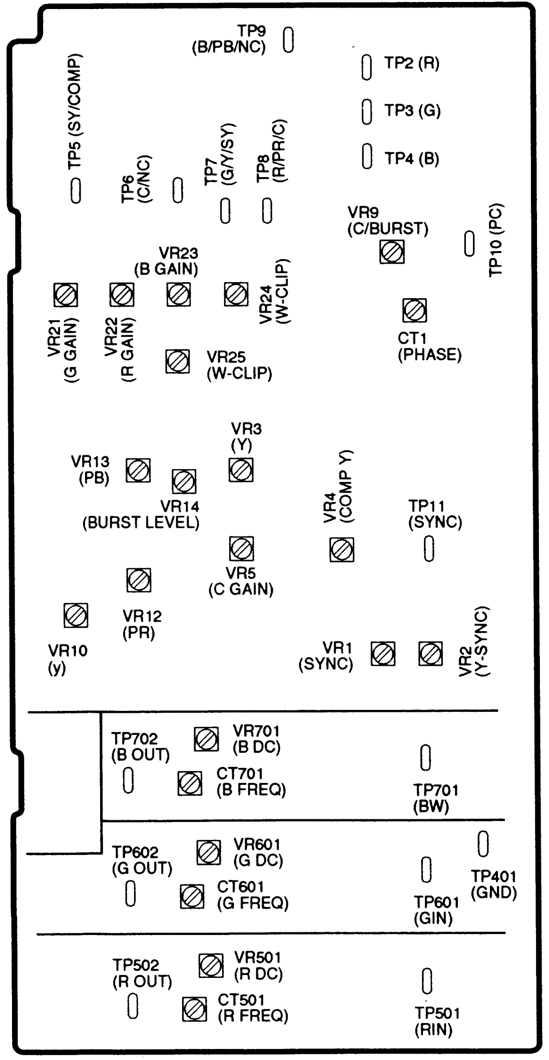
SYNC BOARD (COMPONENT SIDE)


TP9 (G/L FREQ)
VR1(H LOCK)
TP7 (HD PD)
L1 (G/L VCO)
TP8 (SC)
TP3 (M1)
TP5 (G/L VCO)
TP2 (M2)
TP1 (M3)

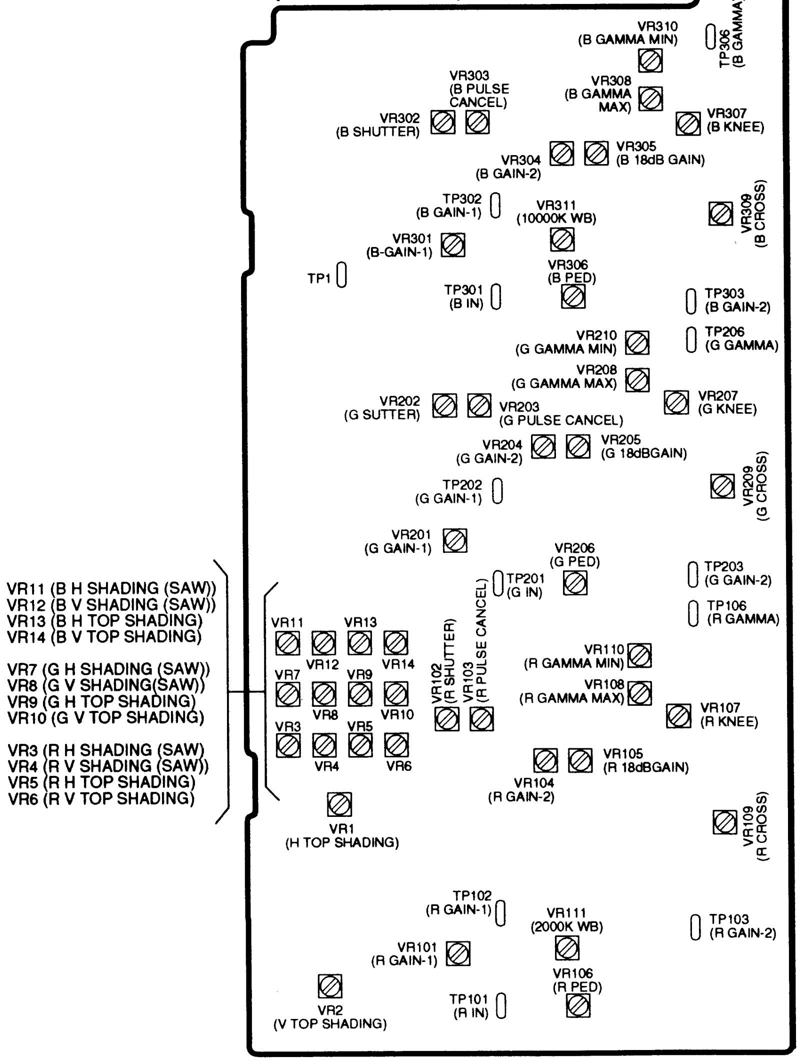
PREAMP/ ENCODER BOARD (COMPONENT SIDE)


Rch
Gch
CN12
Bh
CN1
CN6
VR19 (PAL only)
VR20 (PAL only)
VR8 (CAR BAL R)
VR7 (CAR BAL B)
VR6 (R-YGAIN)
CN2
CN8
CN3
CN7

PREAMP/ENCODER BOARD (PATTERN SIDE)

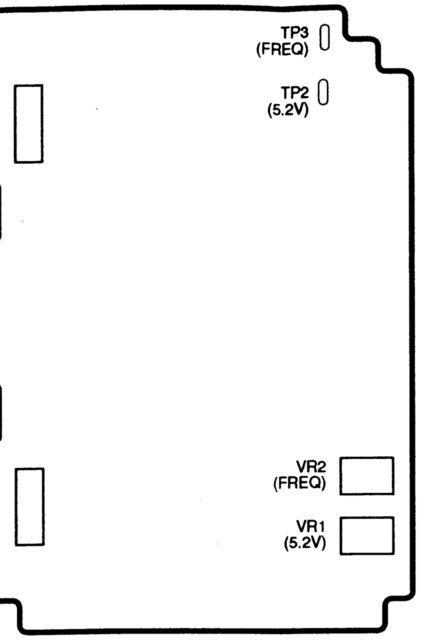

TP9 (B/PB/NC)
TP2 (R)
TP3 (G)
TP4 (B)
TP5 (SY/COMP)
TP6 (C/NC)
TP7 (G/Y/SY)
TP8 (R/PR/C)
VR9 (C/BURST)
TP10 (PC)
VR23 (B GAIN)
VR24 (W-CLIP)
VR21 (G GAIN)
VR22 (R GAIN)
VR25 (W-CLIP)
CT1 (PHASE)
VR3 (Y)
VR13 (PB)
VR14 (BURST LEVEL)
VR4 (COMP Y)
TP11 (SYNC)
VR5 (C GAIN)
VR12 (PR)
VR10 (y)
VR1 (SYNC)
VR2 (Y-SYNC)
TP702 (B OUT)
VR701 (B DC)
CT701 (B FREQ)
TP701 (BW)
TP602 (G OUT)
VR601 (G DC)
CT601 (G FREQ)
TP601 (GIN)
TP401 (GND)
TP502 (R OUT)
VR501 (R DC)
CT501 (R FREQ)
TP501 (RIN)

PREPROCESS BOARD (PATTERN SIDE)

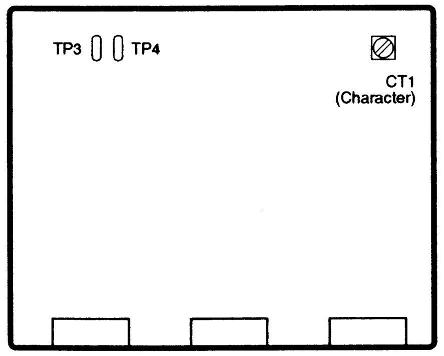

VR310 (B GAMMA MIN)
TP306 (B GAMMA)
VR303 (B PULSE CANCEL)
VR308 (B GAMMA MAX)
VR302 (B SHUTTER)
VR307 (B KNEE)
VR304 (B GAIN-2)
VR305 (B 18dB GAIN)
TP302 (B GAIN-1)
VR311 (10000K WB)
VR309 (B CROSS)
VR301 (B-GAIN-1)
TP1
VR306 (B PED)
TP301 (B IN)
TP303 (B GAIN-2)
VR210 (G GAMMA MIN)
TP206 (G GAMMA)
VR208 (G GAMMA MAX)
VR202 (G SUTTER)
VR203 (G PULSE CANCEL)
VR207 (G KNEE)
VR204 (G GAIN-2)
VR205 (G 18dBGAIN)
VR209 (G CROSS)
TP202 (G GAIN-1)
VR201 (G GAIN-1)
VR206 (G PED)
TP201 (G IN)
TP203 (G GAIN-2)
TP106 (R GAMMA)
VR11 (B H SHADING (SAW))
VR12 (B V SHADING (SAW))
VR13 (B H TOP SHADING)
VR14 (B V TOP SHADING)
VR7 (G H SHADING (SAW))
VR8 (G V SHADING(SAW))
VR9 (G H TOP SHADING)
VR10 (G V TOP SHADING)
VR3 (R H SHADING (SAW)
VR4 (R V SHADING (SAW))
VR5 (R H TOP SHADING)
VR6 (R V TOP SHADING)
VR11
VR13
VR12
VR14
VR7
VR9
VR8
VR10
VR3
VR5
VR4
VR6
VR102 (R SHUTTER)
VR103 (R PULSE CANCEL)
VR110 (R GAMMA MIN)
VR108 (R GAMMA MAX)
VR107 (R KNEE)
VR105 (R 18dBGAIN)
VR104 (R GAIN-2)
VR1 (H TOP SHADING)
VR109 (R CROSS)
TP102 (R GAIN-1)
VR111 (2000K WB)
TP103 (R GAIN-2)
VR101 (R GAIN-1)
VR106 (R PED)
VR2 (V TOP SHADING)
TP101 (R IN)

INTS AND ADJUSTING CONTROLS (WV-E550E)

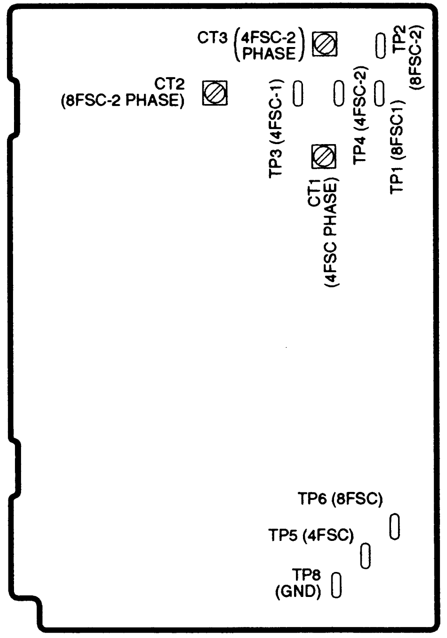
POWER BOARD (PATTERN SIDE)


TP3 (FREQ)
TP2 (5.2V)
VR2 (FREQ)
VR1 (5.2V)

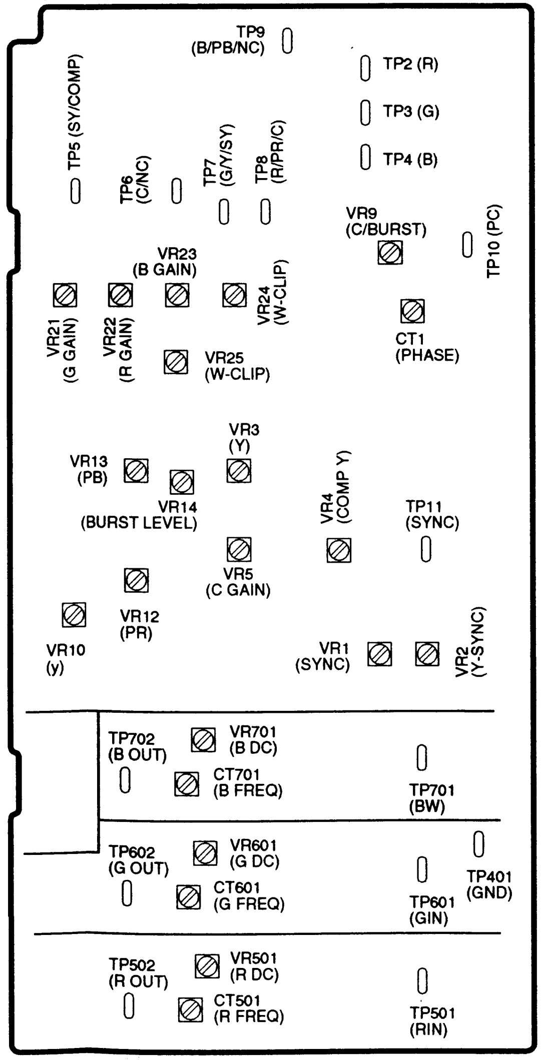
SYSTEM CONTROL BOARD (PATTERN SIDE)


TP3
TP4
CT1 (Character)

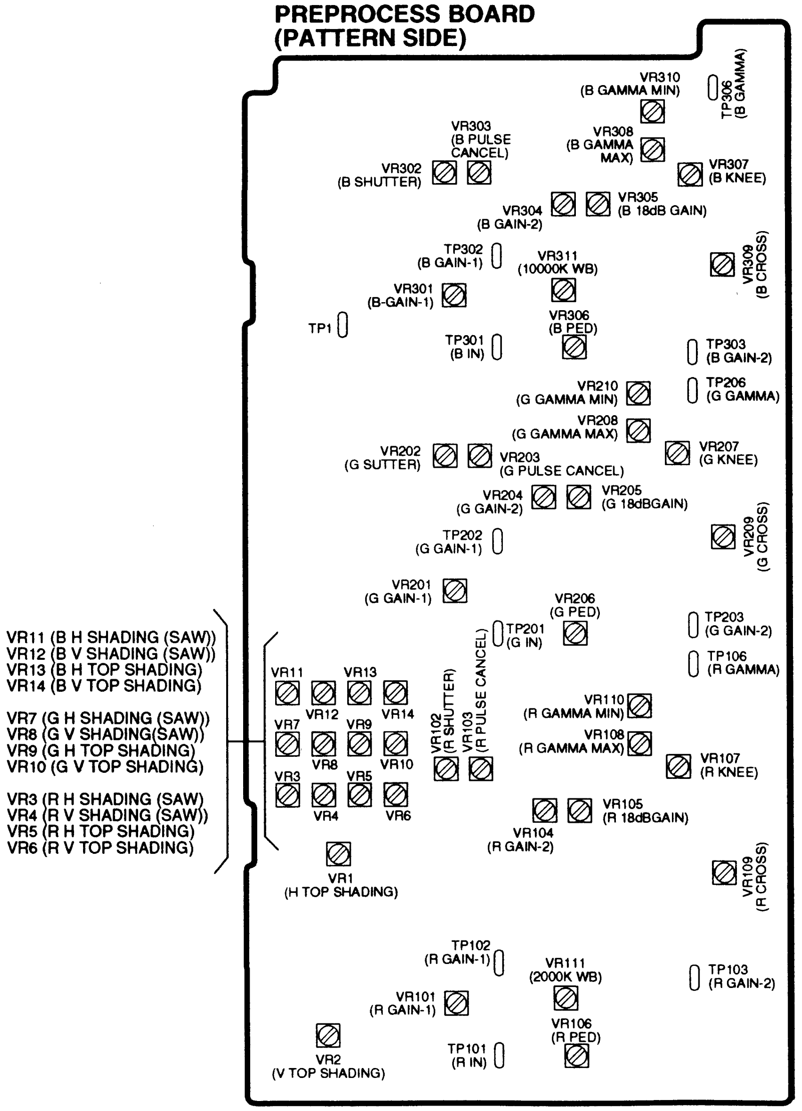
DIGITAL PROCESS BOARD (COMPONENT SIDE)


CT3 (4FSC-2 PHASE)
CT2 (8FSC-2 PHASE)
TP3 (4FSC-1)
CT1 (4FSC PHASE)
TP4 (4FSC-2)
TP1 (8FSC1)
TP2 (8FSC-2)
TP6 (8FSC)
TP5 (4FSC)
TP8 (GND)

PREAMP/ENCODER BOARD (PATTERN SIDE)

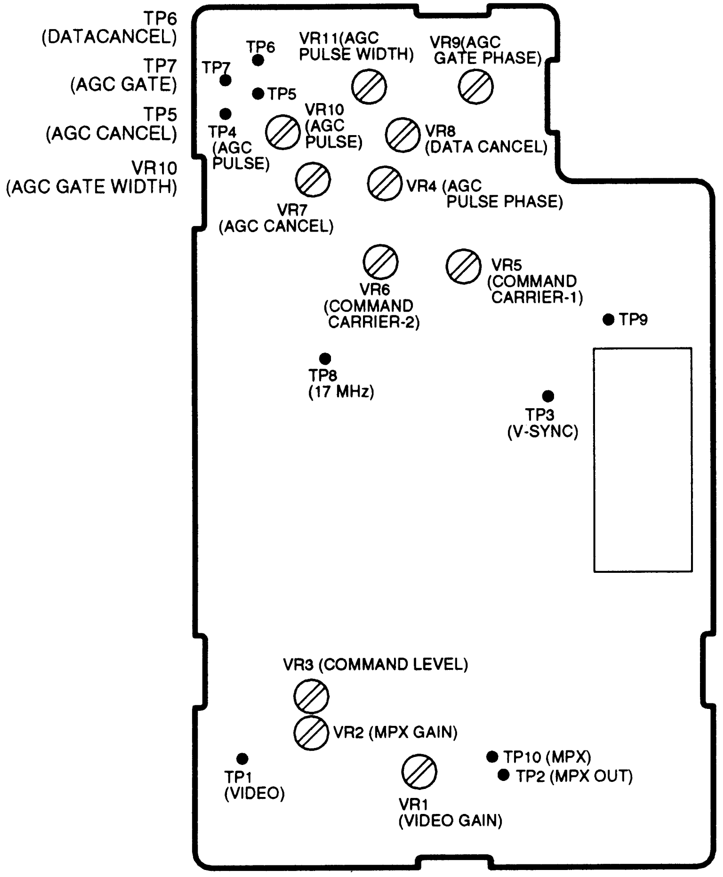

TP9 (B/PB/NC)
TP2 (R)
TP3 (G)
TP4 (B)
TP5 (SY/COMP)
TP6 (C/NC)
TP7 (G/Y/SY)
TP8 (R/PR/C)
VR9 (C/BURST)
TP10 (PC)
VR23 (B GAIN)
VR21 (G GAIN)
VR22 (R GAIN)
VR24 (W-CLIP)
VR25 (W-CLIP)
CT1 (PHASE)
VR3 (Y)
VR13 (PB)
VR14 (BURST LEVEL)
VR4 (COMP Y)
TP11 (SYNC)
VR5 (C GAIN)
VR12 (PR)
VR10 (y)
VR1 (SYNC)
VR2 (Y-SYNC)
TP702 (B OUT)
VR701 (B DC)
CT701 (B FREQ)
TP701 (BW)
TP602 (G OUT)
VR601 (G DC)
CT601 (G FREQ)
TP601 (GIN)
TP401 (GND)
TP502 (R OUT)
VR501 (R DC)
CT501 (R FREQ)
TP501 (RIN)

PREPROCESS BOARD (PATTERN SIDE)

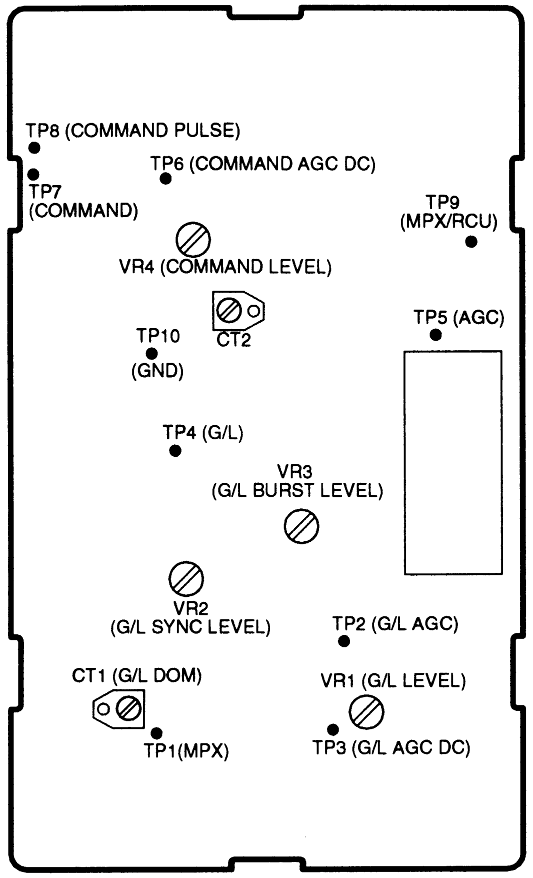

VR11 (B H SHADING (SAW))
VR12 (B V SHADING (SAW))
VR13 (B H TOP SHADING)
VR14 (B V TOP SHADING)
VR7 (G H SHADING (SAW))
VR8 (G V SHADING(SAW))
VR9 (G H TOP SHADING)
VR10 (G V TOP SHADING)
VR3 (R H SHADING (SAW)
VR4 (R V SHADING (SAW))
VR5 (R H TOP SHADING)
VR6 (R V TOP SHADING)
VR310 (B GAMMA MIN)
TP306 (B GAMMA)
VR303 (B PULSE CANCEL)
VR308 (B GAMMA MAX)
VR302 (B SHUTTER)
VR307 (B KNEE)
VR304 (B GAIN-2)
VR305 (B 18dB GAIN)
TP302 (B GAIN-1)
VR311 (10000K WB)
VR309 (B CROSS)
VR301 (B-GAIN-1)
TP1
VR306 (B PED)
TP301 (B IN)
TP303 (B GAIN-2)
VR210 (G GAMMA MIN)
TP206 (G GAMMA)
VR208 (G GAMMA MAX)
VR202 (G SUTTER)
VR203 (G PULSE CANCEL)
VR207 (G KNEE)
VR204 (G GAIN-2)
VR205 (G 18dBGAIN)
VR209 (G CROSS)
TP202 (G GAIN-1)
VR201 (G GAIN-1)
VR206 (G PED)
TP201 (G IN)
TP203 (G GAIN-2)
TP106 (R GAMMA)
VR11
VR13
VR7
VR12
VR9
VR14
VR8
VR10
VR3
VR5
VR4
VR6
VR102 (R SHUTTER)
VR103 (R PULSE CANCEL)
VR110 (R GAMMA MIN)
VR108 (R GAMMA MAX)
VR107 (R KNEE)
VR105 (R 18dBGAIN)
VR104 (R GAIN-2)
VR1 (H TOP SHADING)
VR109 (R CROSS)
TP102 (R GAIN-1)
VR111 (2000K WB)
TP103 (R GAIN-2)
VR101 (R GAIN-1)
VR106 (R PED)
VR2 (V TOP SHADING)
TP101 (R IN)

(WV-PS550)

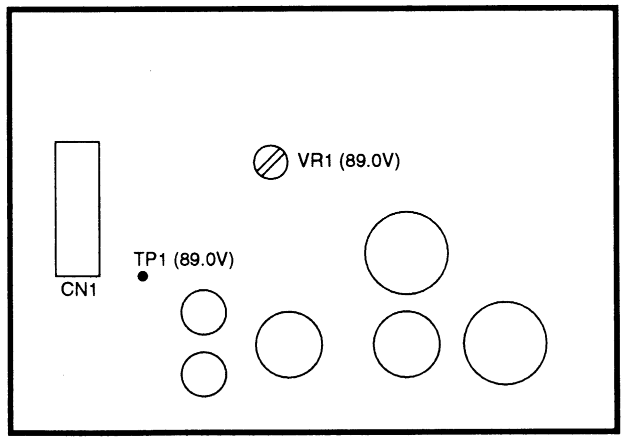
MODULATOR BOARD (COMPONENT SIDE)


TP6 (DATACANCEL)
TP7 (AGC GATE)
TP5 (AGC CANCEL)
VR10 (AGC GATE WIDTH)
TP7
TP6
VR11(AGC PULSE WIDTH)
VR9(AGC GATE PHASE)
TP5
TP4 (AGC PULSE)
VR10 (AGC PULSE)
VR8 (DATA CANCEL)
VR7 (AGC CANCEL)
VR4 (AGC PULSE PHASE)
VR6 (COMMAND CARRIER-2)
VR5 (COMMAND CARRIER-1)
TP9
TP8 (17 MHz)
TP3 (V-SYNC)
VR3 (COMMAND LEVEL)
VR2 (MPX GAIN)
TP1 (VIDEO)
VR1 (VIDEO GAIN)
TP10 (MPX)
TP2 (MPX OUT)

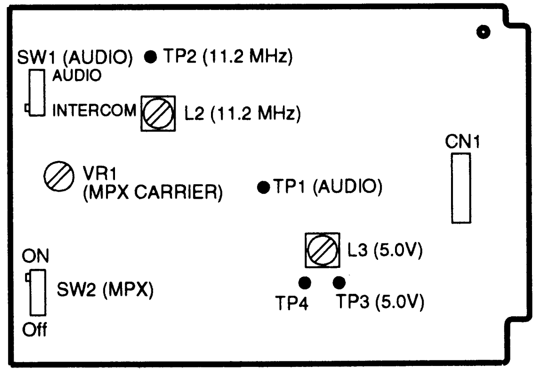
DEMODULATOR BOARD (COMPONENT SIDE)


TP8 (COMMAND PULSE)
TP6 (COMMAND AGC DC)
TP7 (COMMAND)
TP9 (MPX/RCU)
VR4 (COMMAND LEVEL)
TP10 (GND)
CT2
TP5 (AGC)
TP4 (G/L)
VR3 (G/L BURST LEVEL)
VR2 (G/L SYNC LEVEL)
TP2 (G/L AGC)
CT1 (G/L DOM)
VR1 (G/L LEVEL)
TP1(MPX)
TP3 (G/L AGC DC)

POWER SEPARATOR (COMPONENT SIDE)


VR1 (89.0V)
CN1
TP1 (89.0V)

AUDIO BOARD (PATTERN SIDE)


SW1 (AUDIO)
AUDIO
INTERCOM
TP2 (11.2 MHz)
L2 (11.2 MHz)
CN1
VR1 (MPX CARRIER)
TP1 (AUDIO)
ON
SW2 (MPX)
Off
L3 (5.0V)
TP4
TP3 (5.0V)

APPEARANCE OF IC, TRANSISTOR AND DIODE WV-E550E

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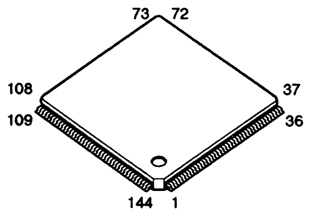
YWVC5777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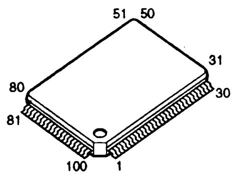
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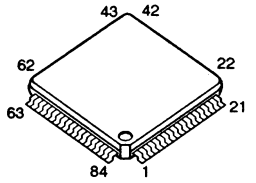
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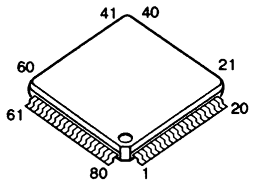
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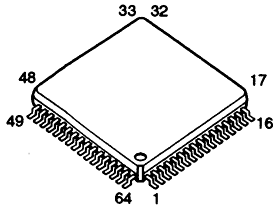
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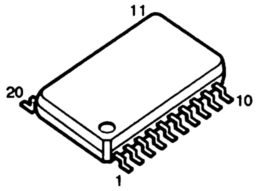

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YWUPD4052BG
YWUPD4050BG
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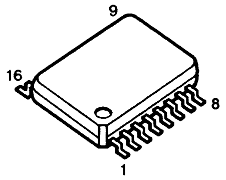

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YWTC74AC00F
YWTC74AC08F
UPD74HC164G
YWTC74AC164F
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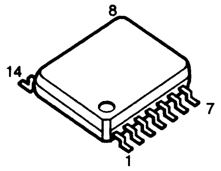

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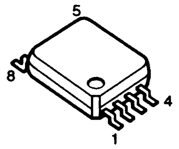

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2SB1218-QRS
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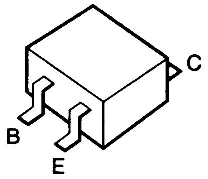

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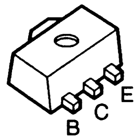

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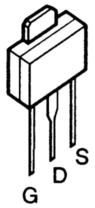

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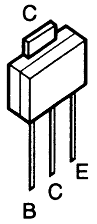

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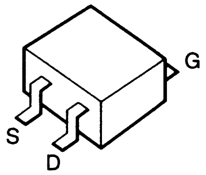

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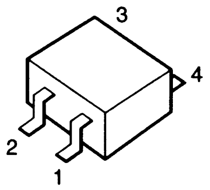
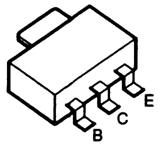


1. Substrate
2. Gate
3. Source
4. Drain

2SB766



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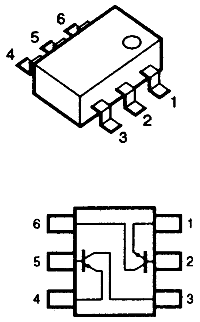
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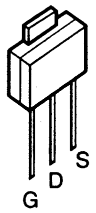

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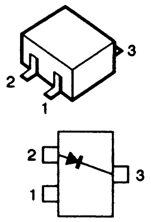

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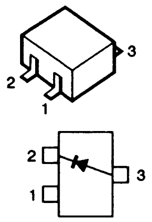

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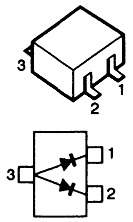

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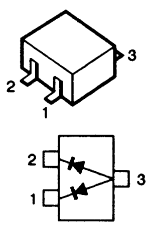

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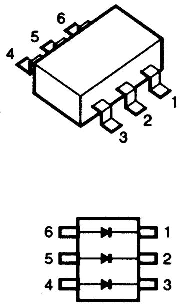
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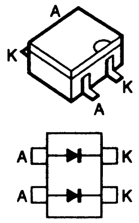

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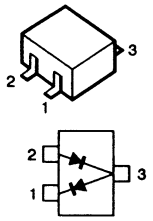

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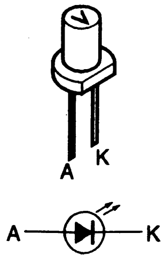

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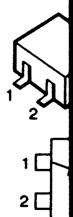

APPEARANCE OF IC, TRANSISTOR AND DIODE WV-E550E

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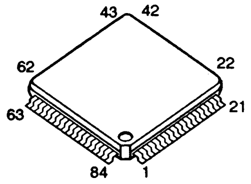
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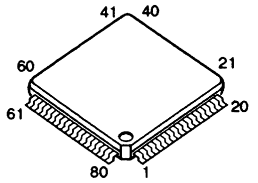
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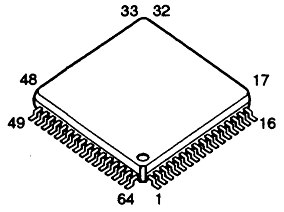
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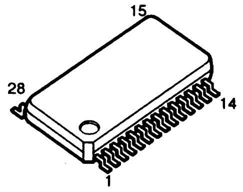

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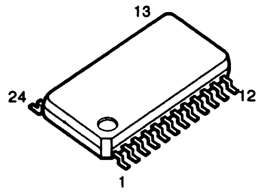

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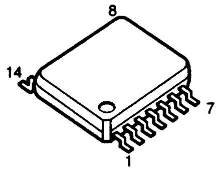

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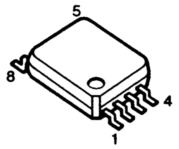

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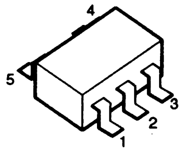

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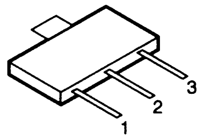

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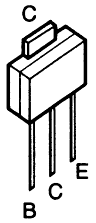

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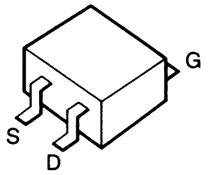

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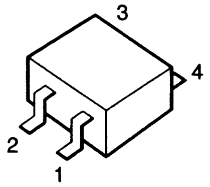

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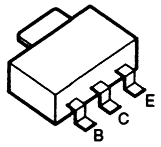
2. Gate
3. Source
4. Drain

2SB766



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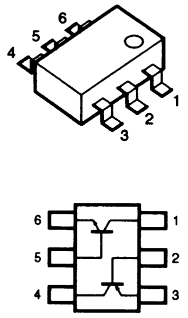
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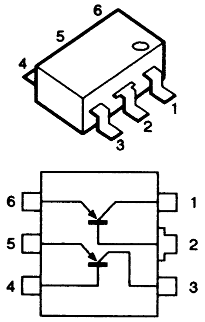
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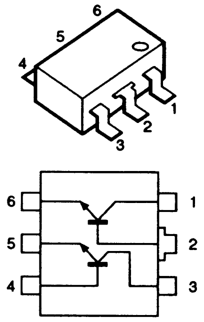
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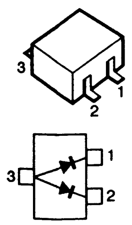
MA141WK



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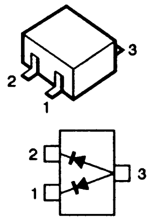

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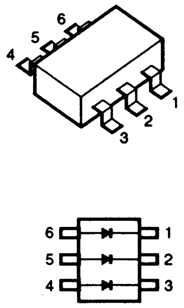
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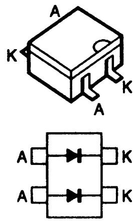
MA159



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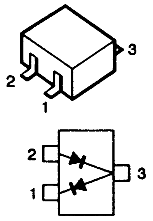
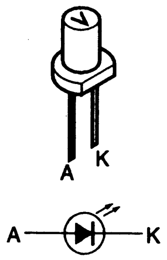
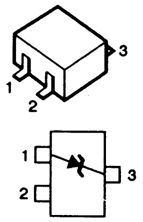


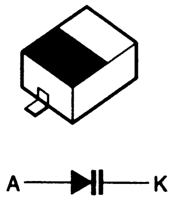
LN277RPX



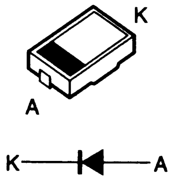
MA3062



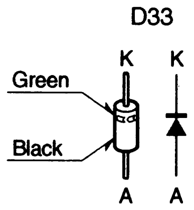
MA372



YWC80204

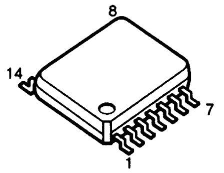


YWERB83004

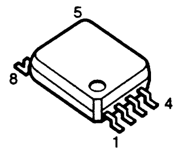

D33
Green
Black
K
K
A
A

APPEARANCE OF IC, TRANSISTOR AND DIODE WV-PS550

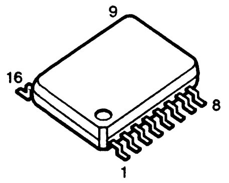
NJM1496M
YWCX20095A
YWUPD74HC08G
YWUPD4538BG



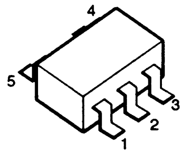
NJM2903M
NJM4556MB
NJM592M8
NJM4556MB
NJM4560M
TLO62CPS
TL092CPS
TLC272CPS
YWLM1881M
YWUPC4062G2
YWUPC4570G



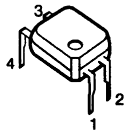
YWUPD4053BG
UPD74HC4050G
UPD74HC390AG
UPD74HC221AG



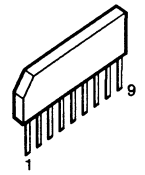
YWTC4S66FR
YWTC4S69F
YWTC7S08F
YWTC7S04F
YWTC7SU04F



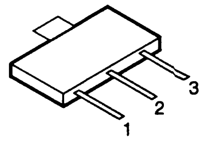
YWSN16913P



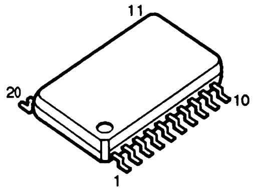
YWTA7303P
YWEH-12A



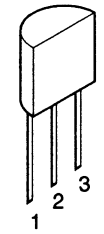
YW78L09UATE1
YW78L05UATE2



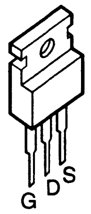
YWMU45407F



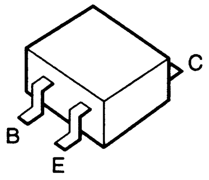
AN1431T



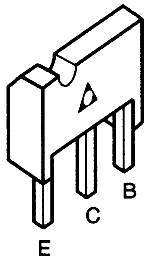
2SJ122



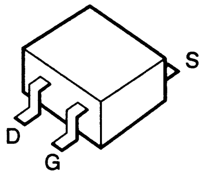
2SA1022-C
2SB709-RS
2SB1218-QRS
2SB1219-QRS
2SC2404-CD
2SC3938-QRS
2SD601-RS
2SD602-QRS
2SB792A-RS
2SD814-QRS



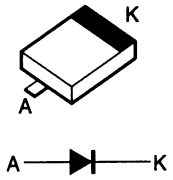
2SB793-RS



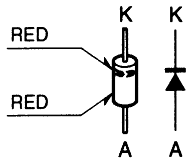
2SK198-Q
2SK662-PQR



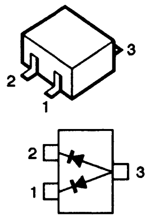
MA338



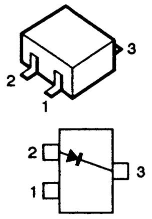
YWRD2R0ESB1
YFRD22EB2
YWRD27EB4
YWRD15EB3


RED
RED
K
K
A
A

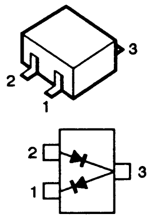
MA151WA



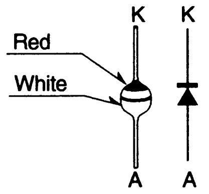
MA151K
MA141K
MA182



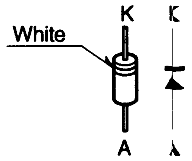
MA153
MA157



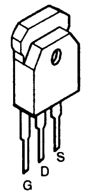
VO3G


Red
White
K
K
A
A

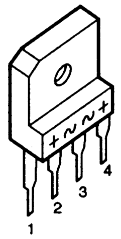
MA165
YWERB38-05



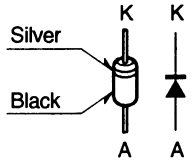
2SK1386



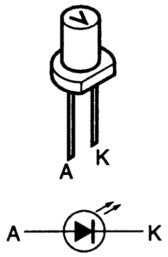
YWD3SBA60



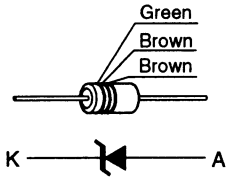
YWERC9102


Silver
Black
K
K
A
A

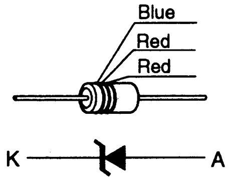
LN277PRX



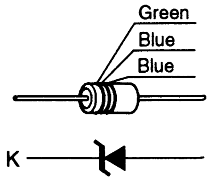
MA1051-M


Green
Brown
Brown
K
A

MA1062-M


Blue
Red
Red
K
A

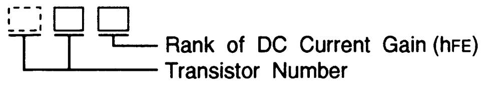
MA1056-H


Green
Blue
Blue
K

CHIP COMPONENTS

1. Chip Transistor

The transistor number is indicated on the top surface of the chip transistor using two alphabet letters or one numerical number and two alphabet letters.



Transistor Number

(Chip Transistor)

Letter	Transistor No.	Letter	Transistor No.
A	2SB709	X	2SD602A
B	2SB709A	Y	2SD601
C	2SB710	Z	2SD601A
D	2SB710A	1A	2SB799
E	2SA1022	1B	2SB814
F	2SA1034	1C	2SB902
H	2SA1035	1F	2SK321
I	2SB792	1K	2SK316
K	2SC2778	1L	2SK247
P	2SD814	1M	2SJ84
Q	2SD813	1N	2SK199
R	2SC2480	1O	2SK198
S	2SC2405	1T	2SC3077
T	2SC2406	1X	2SC2845
U	2SC2404	1Z	2SD1030
V	2SC2295	2B	2SK374
W	2SD602	2C	2SK116
BQ	2SB766A	UMT	2SC4081

(Small Chip Transistor)

Letter	Transistor No.
A	2SB1218
B	2SB1218A
D	2SB1219A
U	2SC3931
W	2SD1820
X	2SD1820A
Y	2SD1819
E3	2SA1226
OS	2SB1219
UC	2SA1532
YU	2SC3938

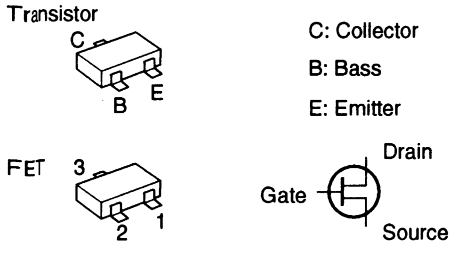
(Pair Transistor)

Letter	Transistor No.
5C	XN4601
5N	XN6501
5O	XN6401
5H	XP4501
5L	XN5501
7F	XN6534
7S	XP1601
7W	XN6435
X1	UMX1
Z1	UMZ1

Example:

WQ → 2SD602-Q
YQ → 2SD601-Q
1BS → 2SB814-S

Appearance and Symbols

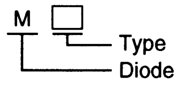


C: Collector
B: Bass
E: Emitter

	1	2	3
Except 2SK199	Drain	Source	Gate
2SK199	Gate	Drain	Source

2. Chip Diode

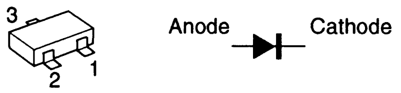
The diode number is indicated on the top surface of the chip diode using two alphabet letters.



Diode Number

Letter	Diode No.	Letter	Diode No.
MA	MA151A	MI	MA152K
MB	MA152A	MK	MA28W-B
MC	MA153	ML	MA28T-A
MD	MA28-A	MN	MA151WA
ME	MA28-B	MO	MA152WA
MF	MA28W-A	MT	MA151WK
MH	MA151K	MU	MA152WK
MH	MA141K	6.2	MA3062
MC	MA143	SMD	RD421D

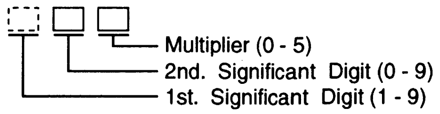
Appearance and Symbol



	1	2	3
MA28/MA28W/MA28T	–	Anode	Cathode
MA151K/MA152K	–	Anode	Cathode
MA151A/MA152A	–	Cathode	Anode
MA151WK/MA152WK	Anode	Anode	Cathode
MA151WA/MA152WA	Cathode	Cathode	Anode
MA153	Cathode	Anode	Common
MA141K	–	Anode	Cathode
MA143	Anode	Cathode	Common
MA3062	Anode	–	Cathode
RD421D	Anode	–	Cathode

3. Chip Resistor

The resistor value is indicated on the bottom surface of the chip resistor using three digit numbers.


Multiplier (0 - 5)
2nd. Significant Digit (0 - 9)
1st. Significant Digit (1 - 9)

Example:

330 → $33 \times 10^{0} = 33\ \Omega$
561 → $56 \times 10^{1} = 560\ \Omega$
123 → $12 \times 10^{3} = 12\ \mathrm{k}\Omega$

Note: Zero ohm resistor (jumper chip) is colored red or green.

4. Chip Capacitor

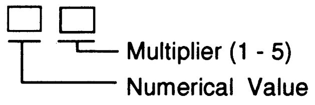
The capacitive value of replacement chip capacitors is indicated on the bottom surface. original parts do not have value indication.

If the capacitive value is less than 100 pF, the value will be indicated by one or two digit number expressing the capacity directly in pF.

Example:

0.5 → 0.5 pF   2.5 → 2.5 pF
.75 → 0.75 pF   33 → 33 pF
1 → 1 pF   82 → 82 pF

If the capacitive value is 100 pF or greater, the value will be indicated by an alpha-numeric code. The letter precedes the number and expresses a numerical value to be multiplied by the number which follows.



Numerical Value

Letter	Value	Letter	Value
A	10	N	33
B	11	P	36
C	12	Q	39
D	13	R	43
E	15	S	47
F	16	T	51
G	18	U	56
H	20	V	62
J	22	W	68
K	24	X	75
L	27	Y	82
M	30	Z	91

* Letters I and O are not used.

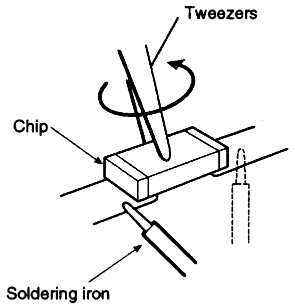
Example:
A1 → $10 \times 10^{1} = 100$ pF
N2 → $33 \times 10^{2} = 3300$ pF
S3 → $47 \times 10^{3} = 47000$ pF

5. Precautions in replacing the chip component

1. Make sure that the unit is turned OFF when replacing the chip.
2. Use tweezers to prevent any damage to the chip surface.
3. Do not re-use the chips after removal.
4. Do not rub the electrode of chips.
5. Do not subject the chips to excessive stress.
6. It is recommended that a pencil-type soldering iron to be used.
7. The solder whose diameter is less than 0.5 mm is recommended.
8. Do not heat the chip beyond 3 second.
9. Maintain temperature control under 260°C (500°F) when soldering.

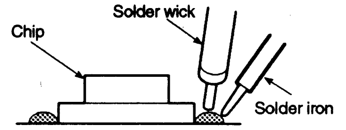
5-1 Removal (Transistor, Diode, Resistor and Capacitor)

1. Add the solder to both ends of the chip (three leads for chip transistor).
2. While attaching the sokdering iron to both ends of the chip (three leads for chip transistor) as shown below, remove the chip by turning with tweezers.
   Note: Be careful not to damage other chips.

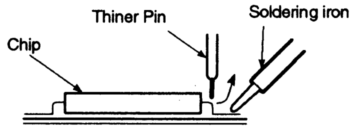


5-2 Removal (IC)

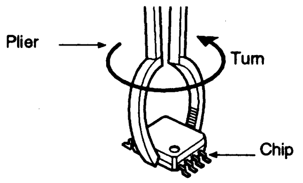
1. Add the solder wick and soldering iron to each lead of the IC and remove solder.



2. Add the soldering iron to each lead of the IC and left each lead of the IC using thiner pin.

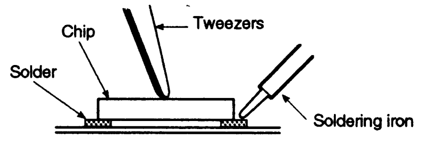


3. Remove IC turning it with plier.

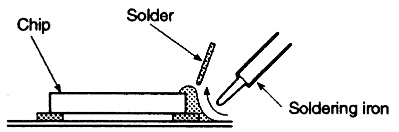


5-3 Mounting

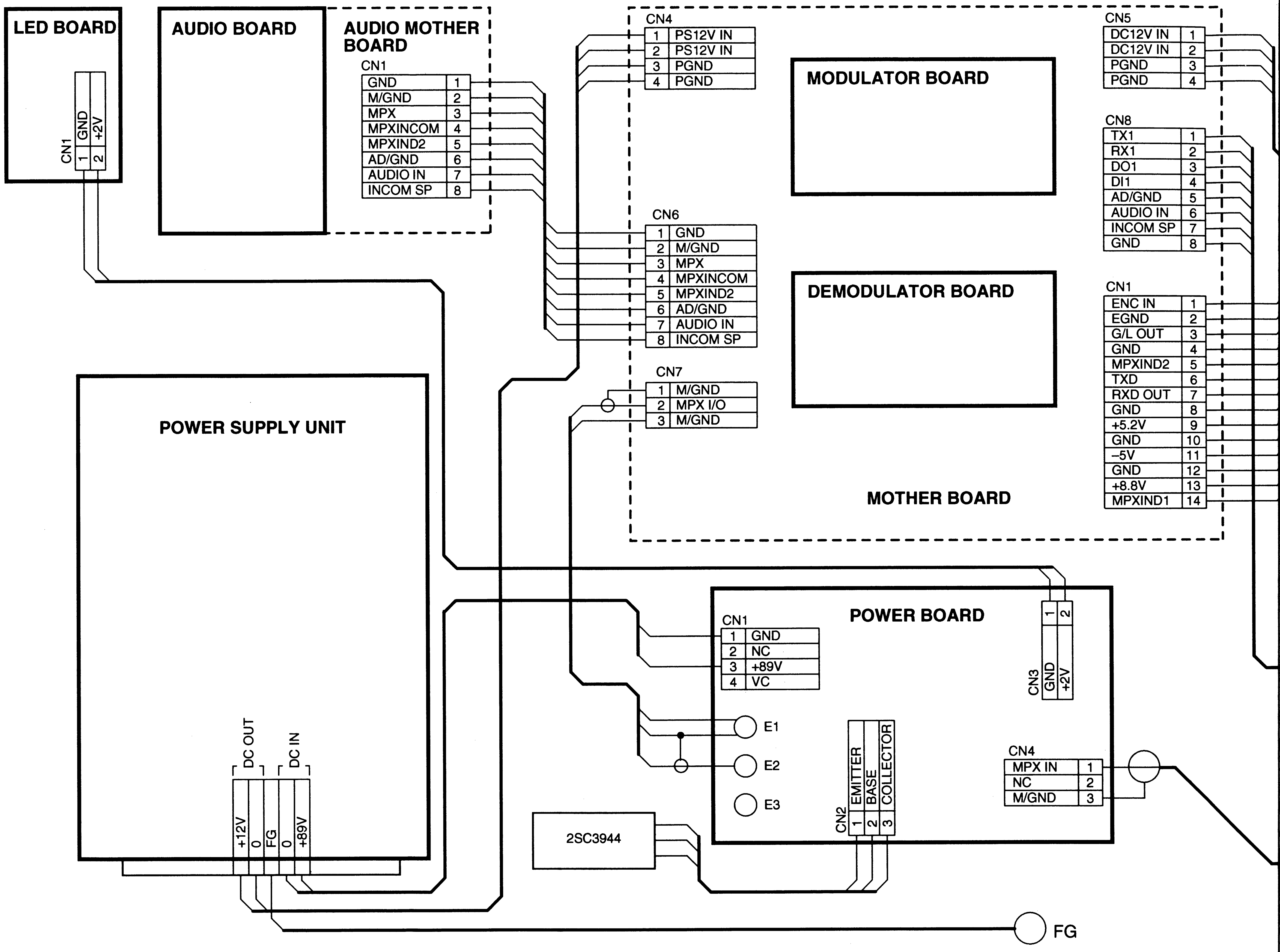
1. Place the solder thinly on the chip mounting foil.
2. Solder the chip temporarily while holding the chip with the tweezers.



3. Solder both ends of chip (three leads for chip transistor).

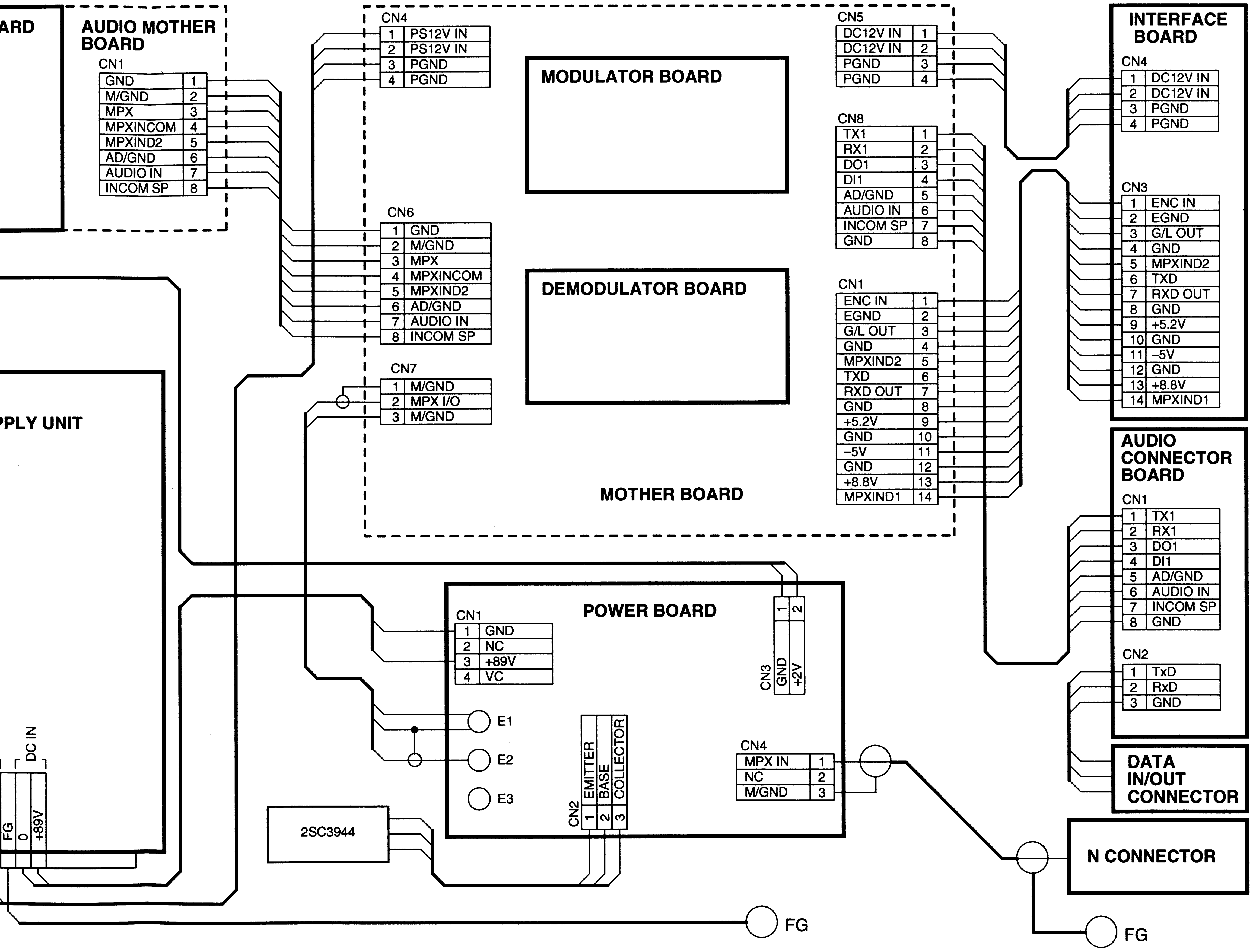


WIRING DIAGRAM (WV-PS550)

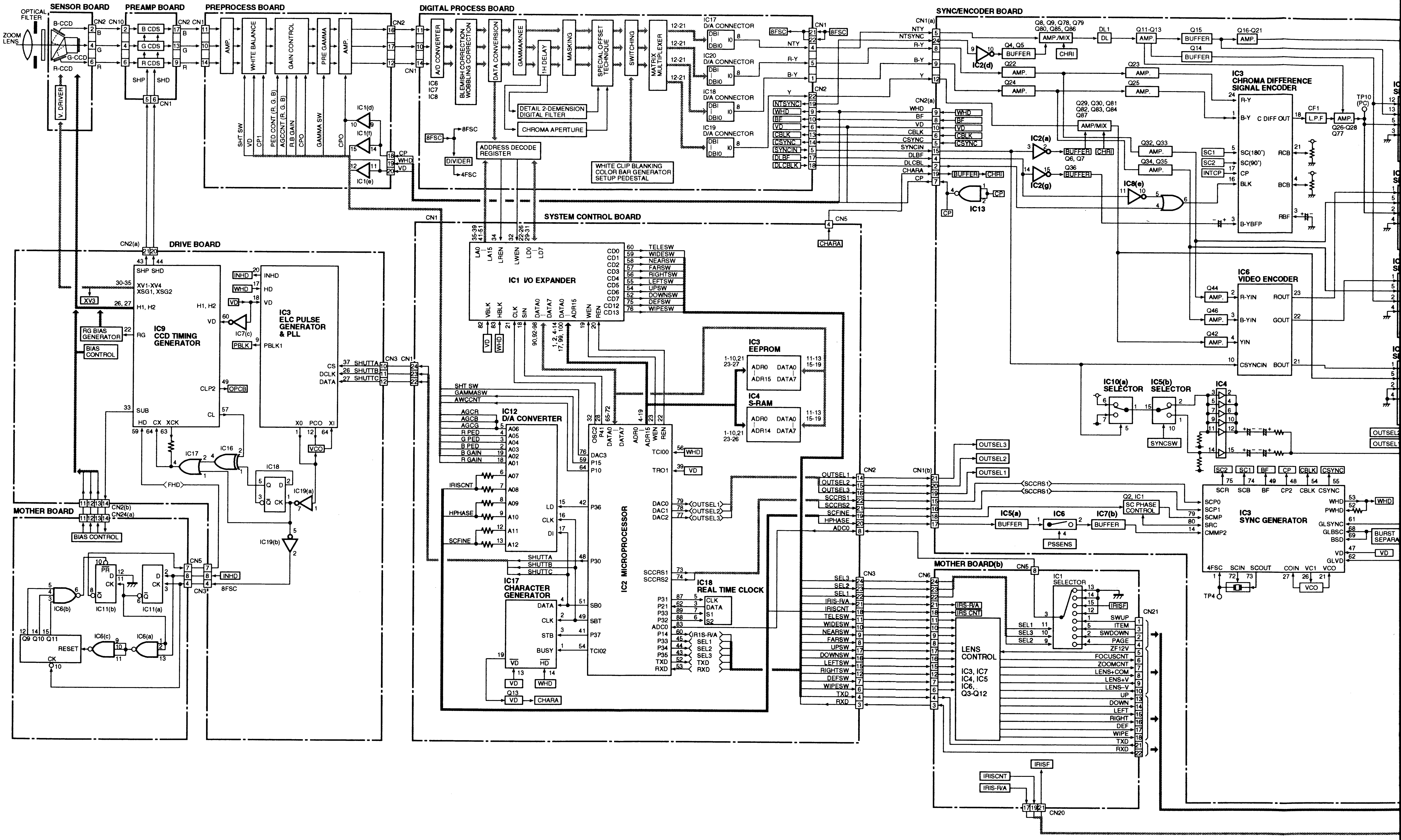


LED BOARD
CN1
1 GND
2 +2V
AUDIO BOARD
AUDIO MOTHER BOARD
CN1
GND 1
M/GND 2
MPX 3
MPXINCOM 4
MPXIND2 5
AD/GND 6
AUDIO IN 7
INCOM SP 8
CN4
1 PS12V IN
2 PS12V IN
3 PGND
4 PGND
CN6
1 GND
2 M/GND
3 MPX
4 MPXINCOM
5 MPXIND2
6 AD/GND
7 AUDIO IN
8 INCOM SP
CN7
1 M/GND
2 MPX I/O
3 M/GND
MODULATOR BOARD
DEMODULATOR BOARD
MOTHER BOARD
CN5
DC12V IN 1
DC12V IN 2
PGND 3
PGND 4
CN8
TX1 1
RX1 2
DO1 3
DI1 4
AD/GND 5
AUDIO IN 6
INCOM SP 7
GND 8
CN1
ENC IN 1
EGND 2
G/L OUT 3
GND 4
MPXIND2 5
TXD 6
RXD OUT 7
GND 8
+5.2V 9
GND 10
–5V 11
GND 12
+8.8V 13
MPXIND1 14
POWER SUPPLY UNIT
DC OUT
DC IN
+12V
0
FG
0
+89V
POWER BOARD
CN1
1 GND
2 NC
3 +89V
4 VC
CN3
1 GND
2 +2V
E1
E2
E3
CN2
1 EMITTER
2 BASE
3 COLLECTOR
CN4
MPX IN 1
NC 2
M/GND 3
2SC3944
FG

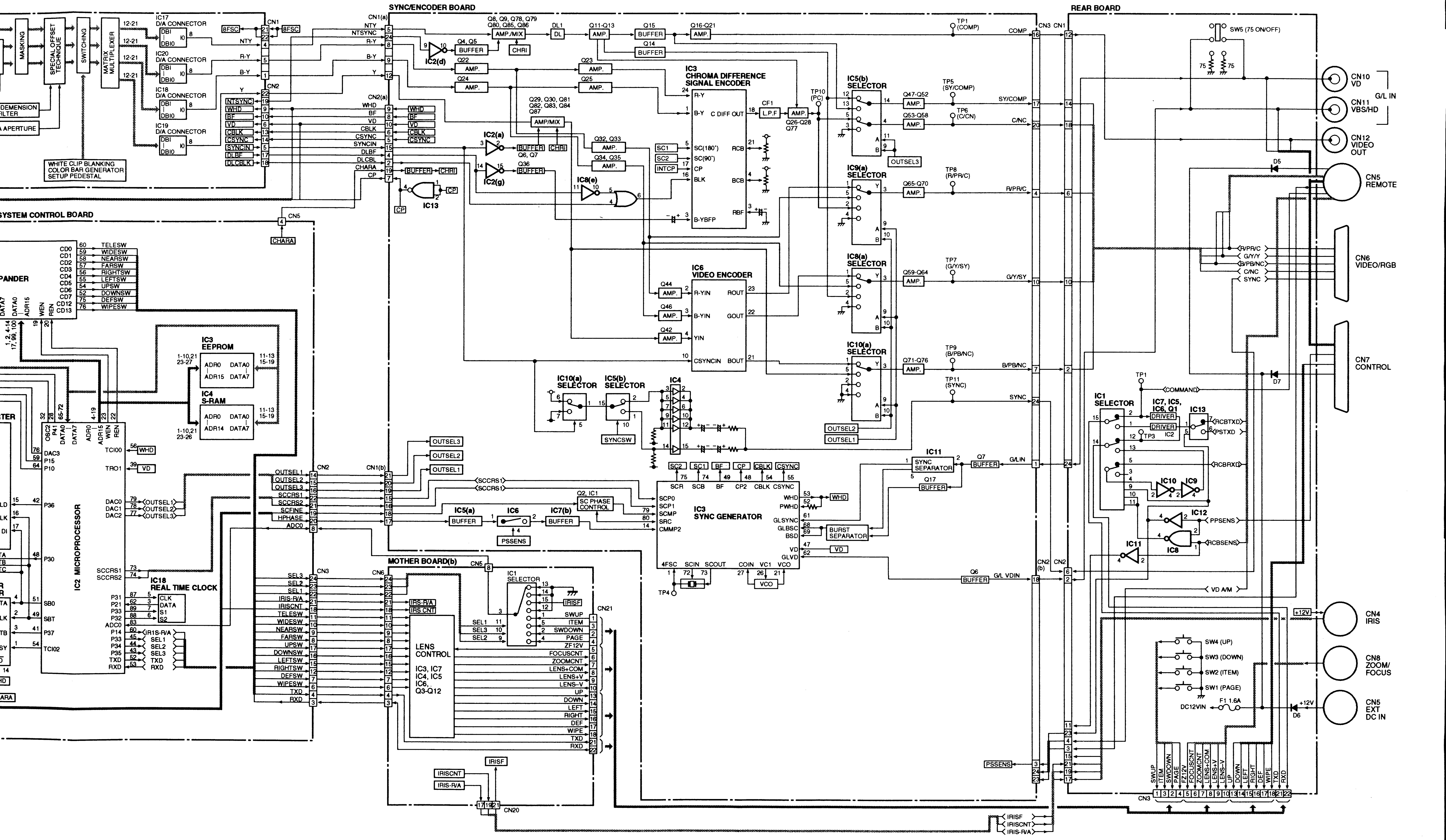
WIRING DIAGRAM (WV-PS550)


ARD
AUDIO MOTHER BOARD
CN1
GND 1
M/GND 2
MPX 3
MPXINCOM 4
MPXIND2 5
AD/GND 6
AUDIO IN 7
INCOM SP 8
PPLY UNIT
DC IN
FG
0
+89V
MOTHER BOARD
CN4
1 PS12V IN
2 PS12V IN
3 PGND
4 PGND
CN6
1 GND
2 M/GND
3 MPX
4 MPXINCOM
5 MPXIND2
6 AD/GND
7 AUDIO IN
8 INCOM SP
CN7
1 M/GND
2 MPX I/O
3 M/GND
MODULATOR BOARD
DEMODULATOR BOARD
CN5
DC12V IN 1
DC12V IN 2
PGND 3
PGND 4
CN8
TX1 1
RX1 2
DO1 3
DI1 4
AD/GND 5
AUDIO IN 6
INCOM SP 7
GND 8
CN1
ENC IN 1
EGND 2
G/L OUT 3
GND 4
MPXIND2 5
TXD 6
RXD OUT 7
GND 8
+5.2V 9
GND 10
–5V 11
GND 12
+8.8V 13
MPXIND1 14
INTERFACE BOARD
CN4
1 DC12V IN
2 DC12V IN
3 PGND
4 PGND
CN3
1 ENC IN
2 EGND
3 G/L OUT
4 GND
5 MPXIND2
6 TXD
7 RXD OUT
8 GND
9 +5.2V
10 GND
11 –5V
12 GND
13 +8.8V
14 MPXIND1
AUDIO CONNECTOR BOARD
CN1
1 TX1
2 RX1
3 DO1
4 DI1
5 AD/GND
6 AUDIO IN
7 INCOM SP
8 GND
CN2
1 TxD
2 RxD
3 GND
DATA IN/OUT CONNECTOR
N CONNECTOR
POWER BOARD
CN1
1 GND
2 NC
3 +89V
4 VC
CN3
1 GND
2 +2V
E1
E2
E3
CN2
1 EMITTER
2 BASE
3 COLLECTOR
CN4
MPX IN 1
NC 2
M/GND 3
2SC3944
FG
FG

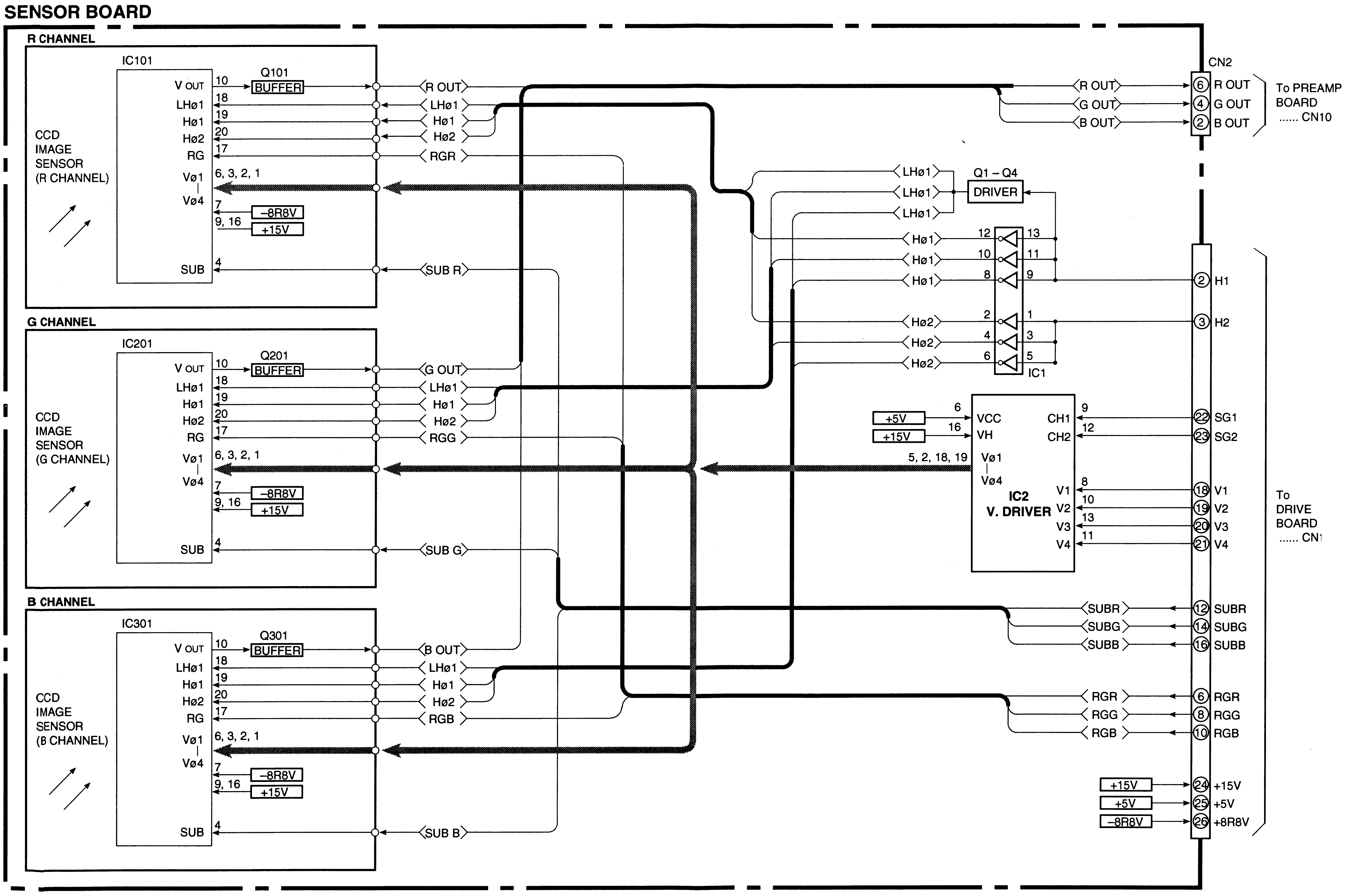
OVERALL BLOCK DIAGRAM


OPTICAL FILTER
ZOOM LENS
SENSOR BOARD
B-CCD
G-CCD
R-CCD
V. DRIVER
PREAMP BOARD
B CDS
G CDS
R CDS
SHP
SHD
PREPROCESS BOARD
AMP.
WHITE BALANCE
GAIN CONTROL
PRE GAMMA
AMP.
SHT SW
VD
CP1
PED CONT (R, G, B)
AGCCNT (R, G, B)
R.B GAIN
CPO
GAMMA SW
CPO
IC1(d)
IC1(f)
IC1(e)
DIGITAL PROCESS BOARD
A/D CONVERTER
IC6
IC7
IC8
BLEMISH CORRECTION WOBBLING CORRECTION
DATA CONVERSION
GAMMA/KNEE
1H DELAY
MASKING
SPECIAL OFFSET TECHNIQUE
SWITCHING
MATRIX MULTIPLEXER
DETAIL 2-DEMENSION DIGITAL FILTER
CHROMA APERTURE
8FSC
DIVIDER
4FSC
ADDRESS DECODE REGISTER
WHITE CLIP BLANKING COLOR BAR GENERATOR SETUP PEDESTAL
IC17 D/A CONNECTOR
IC20 D/A CONNECTOR
IC18 D/A CONNECTOR
IC19 D/A CONNECTOR
NTY
R-Y
B-Y
Y
NTSYNC
WHD
BF
VD
CBLK
CSYNC
SYNCIN
DLBF
DLCBLK
SYNC/ENCODER BOARD
Q8, Q9, Q78, Q79 Q80, Q85, Q86
AMP./MIX
DL1
DL
Q11-Q13
AMP.
Q15
BUFFER
Q14
BUFFER
Q16-Q21
AMP.
IC2(d)
Q4, Q5
BUFFER
CHRI
Q22
AMP.
Q24
AMP.
Q23
AMP.
Q25
AMP.
IC3 CHROMA DIFFERENCE SIGNAL ENCODER
R-Y
B-Y
C DIFF OUT
CF1
L.P.F
AMP.
Q26-Q28 Q77
TP10 (PC)
Q29, Q30, Q81 Q82, Q83, Q84 Q87
AMP/MIX
IC2(a)
BUFFER
Q6, Q7
Q32, Q33
AMP.
Q34, Q35
AMP.
Q36
BUFFER
IC2(g)
SC1
SC2
INTCP
SC(180°)
SC(90°)
CP
BLK
RCB
BCB
RBF
B-YBFP
IC8(e)
IC13
CP
CHARA
IC6 VIDEO ENCODER
Q44
AMP.
Q46
AMP.
Q42
AMP.
R-YIN
B-YIN
YIN
CSYNCIN
ROUT
GOUT
BOUT
IC10(a) SELECTOR
IC5(b) SELECTOR
SYNCSW
IC4
OUTSEL2
OUTSEL1
OUTSEL3
CN5
SYSTEM CONTROL BOARD
IC1 I/O EXPANDER
LA0
LA15
LREN
LWEN
LD0
LD7
VBLK
HBLK
CLK
SIN
DATA0
DATA7
ADR15
WEN
REN
CD0
CD13
TELESW
WIDESW
NEARSW
FARSW
RIGHTSW
LEFTSW
UPSW
DOWNSW
DEFSW
WIPESW
IC3 EEPROM
ADR0
ADR15
DATA0
DATA7
IC4 S-RAM
ADR14
IC12 D/A CONVERTER
AGCR
AGCB
AGCG
R PED
G PED
B PED
B GAIN
R GAIN
IRISCNT
HPHASE
SCFINE
A01
A13
LD
CLK
DI
SHUTTA
SHUTTB
SHUTTC
IC17 CHARACTER GENERATOR
DATA
CLK
STB
BUSY
VD
HD
Q13
IC2 MICROPROCESSOR
OSC2
P41
DAC3
P15
P10
P36
P30
SB0
SBT
P37
TCI02
TCI00
TRO1
DAC0
DAC1
DAC2
SCCRS1
SCCRS2
IC18 REAL TIME CLOCK
CLK
DATA
S1
S2
P31
P21
P33
P32
ADC0
P14
P34
P35
TXD
RXD
IRIS-R/A
SEL1
SEL2
SEL3
DRIVE BOARD
IC9 CCD TIMING GENERATOR
SHP SHD
XV1-XV4
XSG1, XSG2
H1, H2
RG
CLP2
SUB
HD
CX
XCK
CL
XV3
RG BIAS GENERATOR
BIAS CONTROL
IC3 ELC PULSE GENERATOR & PLL
INHD
HD
VD
PBLK1
CS
DCLK
DATA
X0
PCO
XI
VCO
IC7(c)
PBLK
OPCB
IC17
IC16
IC18
IC19(a)
IC19(b)
FHD
MOTHER BOARD
BIAS CONTROL
IC6(b)
IC11(b)
IC11(a)
Q9 Q10 Q11
RESET
IC6(c)
IC6(a)
8FSC
INHD
CN1(b)
IC5(a)
BUFFER
IC6
IC7(b)
BUFFER
PSSENS
Q2, IC1
SC PHASE CONTROL
SCP0
SCP1
SCMP
SRC
CMMP2
IC3 SYNC GENERATOR
SCR
SCB
BF
CP2
CBLK
CSYNC
WHD
PWHD
GLSYNC
GLBSC
BSD
VD
GLVD
4FSC
SCIN
SCOUT
COIN
VC1
VCO
TP4
BURST SEPARA
MOTHER BOARD(b)
IC1 SELECTOR
IRISF
SWUP
ITEM
SWDOWN
PAGE
ZF12V
FOCUSCNT
ZOOMCNT
LENS+COM
LENS+V
LENS-V
UP
DOWN
LEFT
RIGHT
DEF
WIPE
TXD
RXD
LENS CONTROL
IC3, IC7 IC4, IC5 IC6, Q3-Q12
IRIS-R/A
IRIS CNT
IRISCNT
CN20
CN21

OVERALL BLOCK DIAGRAM

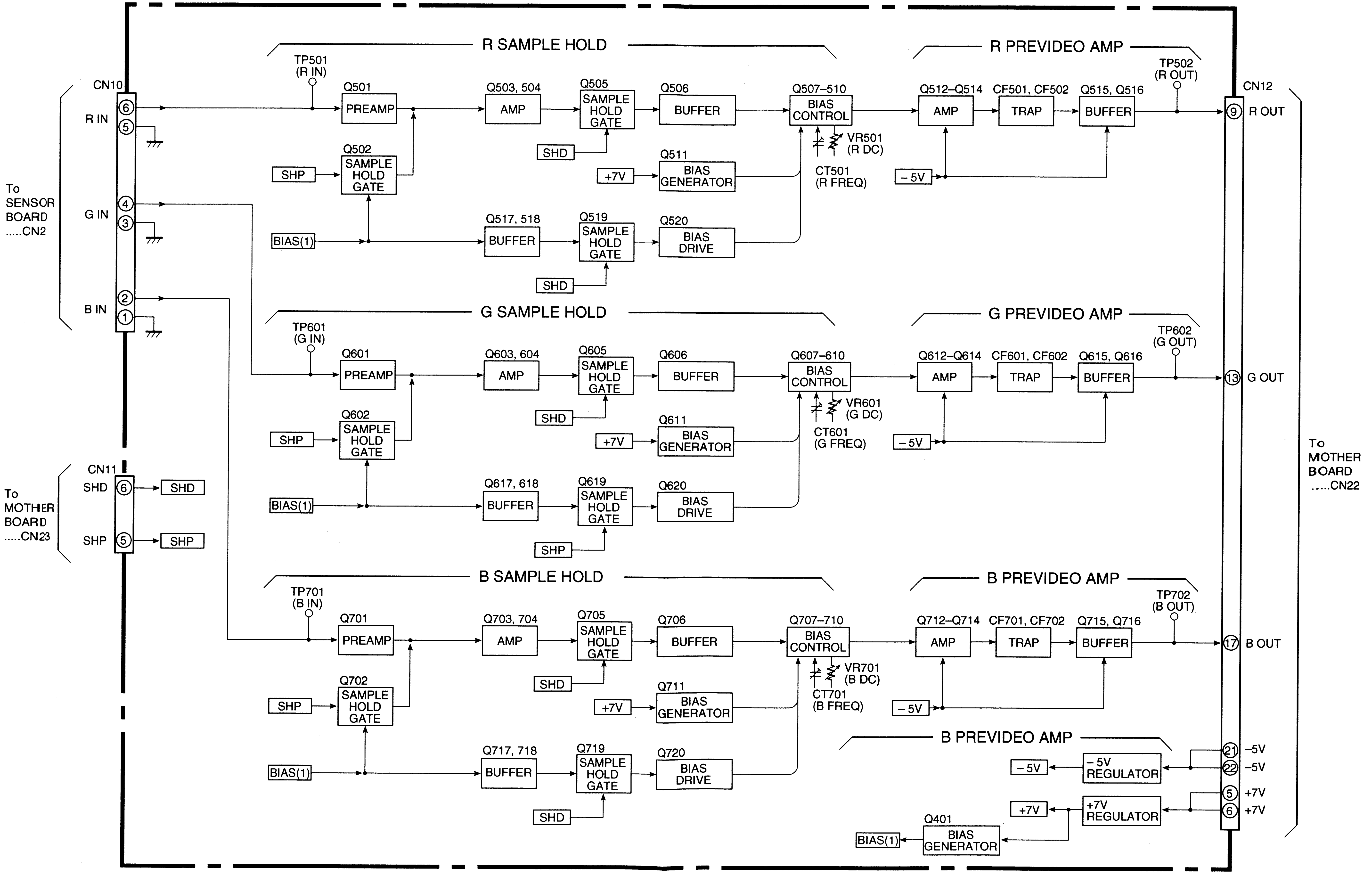

SYNC/ENCODER BOARD
REAR BOARD
SYSTEM CONTROL BOARD
MOTHER BOARD(b)
MASKING
SPECIAL OFFSET TECHNIQUE
SWITCHING
MATRIX MULTIPLEXER
DEMENSION FILTER
APERTURE
WHITE CLIP BLANKING
COLOR BAR GENERATOR
SETUP PEDESTAL
IC17 D/A CONNECTOR
IC20 D/A CONNECTOR
IC18 D/A CONNECTOR
IC19 D/A CONNECTOR
IC3 CHROMA DIFFERENCE SIGNAL ENCODER
IC6 VIDEO ENCODER
IC3 SYNC GENERATOR
IC5(b) SELECTOR
IC9(a) SELECTOR
IC8(a) SELECTOR
IC10(a) SELECTOR
IC11 SYNC SEPARATOR
BURST SEPARATOR
SC PHASE CONTROL
LENS CONTROL
IC3, IC7, IC4, IC5, IC6, Q3-Q12
IC1 SELECTOR
IC7, IC5, IC6, Q1 DRIVER
IC2 MICROPROCESSOR
IC3 EEPROM
IC4 S-RAM
IC18 REAL TIME CLOCK
PANDER
SW5 (75 ON/OFF)
CN10 VD
CN11 VBS/HD
G/L IN
CN12 VIDEO OUT
CN5 REMOTE
CN6 VIDEO/RGB
CN7 CONTROL
CN4 IRIS
CN8 ZOOM/FOCUS
CN5 EXT DC IN
SW4 (UP)
SW3 (DOWN)
SW2 (ITEM)
SW1 (PAGE)
DC12VIN
F1 1.6A
TP1 (COMP)
TP5 (SY/COMP)
TP6 (C/CN)
TP8 (R/PR/C)
TP7 (G/Y/SY)
TP9 (B/PB/NC)
TP11 (SYNC)
TP10 (PC)
COMP
SY/COMP
C/NC
R/PR/C
G/Y/SY
B/PB/NC
SYNC
G/LIN
G/L VDIN
PSSENS
SYNCSW
OUTSEL1
OUTSEL2
OUTSEL3
IRISF
IRISCNT
IRIS-R/A

BLOCK DIAGRAM OF SENSOR BOARD

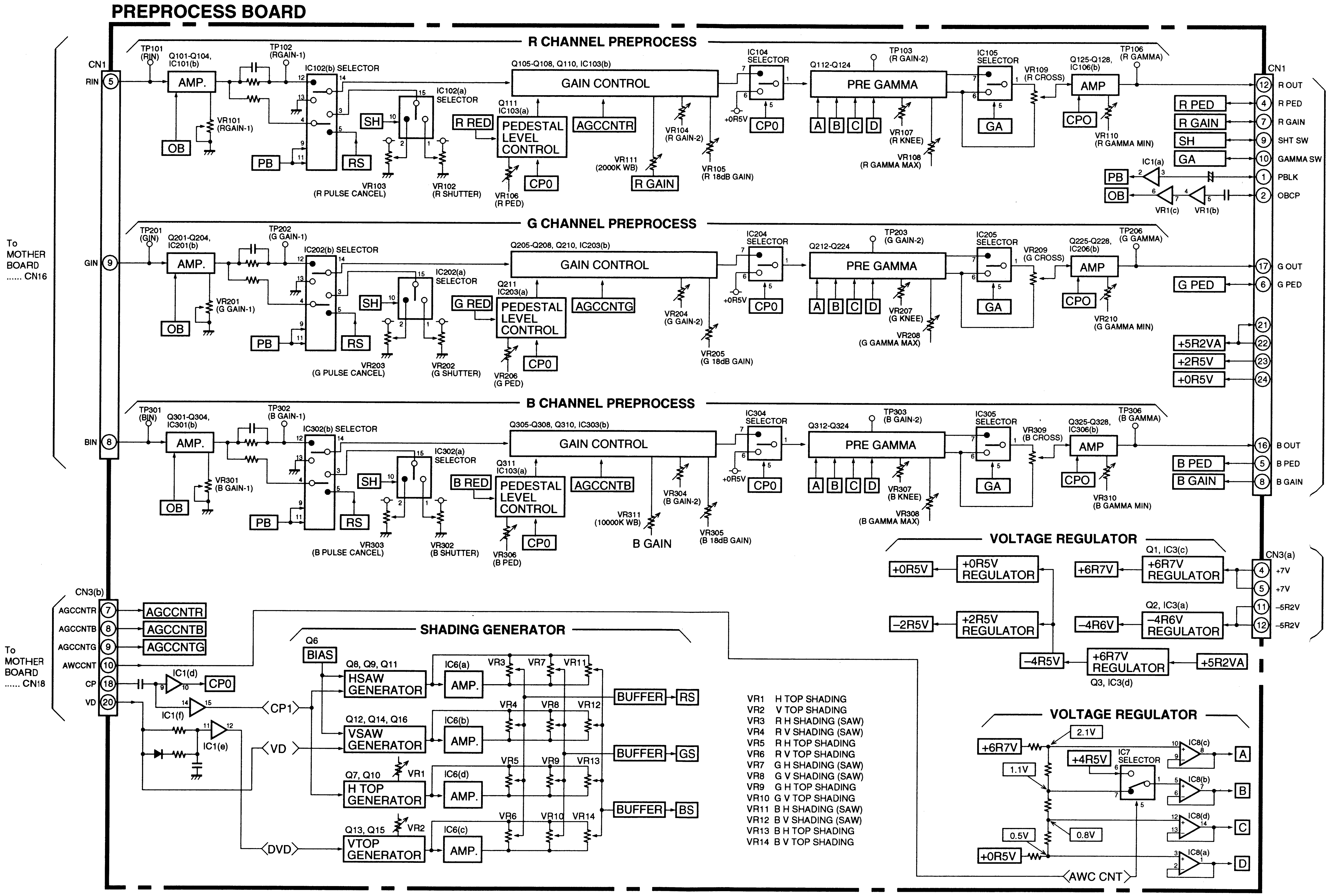

SENSOR BOARD
R CHANNEL
IC101
CCD IMAGE SENSOR (R CHANNEL)
V OUT
LHø1
Hø1
Hø2
RG
Vø1 | Vø4
SUB
10
18
19
20
17
6, 3, 2, 1
7
9, 16
4
Q101
BUFFER
-8R8V
+15V
R OUT
LHø1
Hø1
Hø2
RGR
SUB R
G CHANNEL
IC201
CCD IMAGE SENSOR (G CHANNEL)
Q201
BUFFER
G OUT
RGG
SUB G
B CHANNEL
IC301
CCD IMAGE SENSOR (B CHANNEL)
Q301
BUFFER
B OUT
RGB
SUB B
CN2
⑥ R OUT
④ G OUT
② B OUT
To PREAMP BOARD CN10
Q1 – Q4
DRIVER
LHø1
Hø1
Hø2
12
10
8
2
4
6
13
11
9
1
3
5
IC1
② H1
③ H2
+5V
+15V
6
16
VCC
VH
5, 2, 18, 19
Vø1 | Vø4
IC2
V. DRIVER
CH1
CH2
9
12
V1
V2
V3
V4
8
10
13
11
㉒ SG1
㉓ SG2
⑱ V1
⑲ V2
⑳ V3
㉑ V4
To DRIVE BOARD CN1
SUBR
SUBG
SUBB
⑫ SUBR
⑭ SUBG
⑯ SUBB
RGR
RGG
RGB
⑥ RGR
⑧ RGG
⑩ RGB
+15V
+5V
-8R8V
㉔ +15V
㉕ +5V
㉖ +8R8V

BLOCK DIAGRAM OF PREAMP/ENCODER BOARD (PREAMP SECTION)

PREAMP SECTION

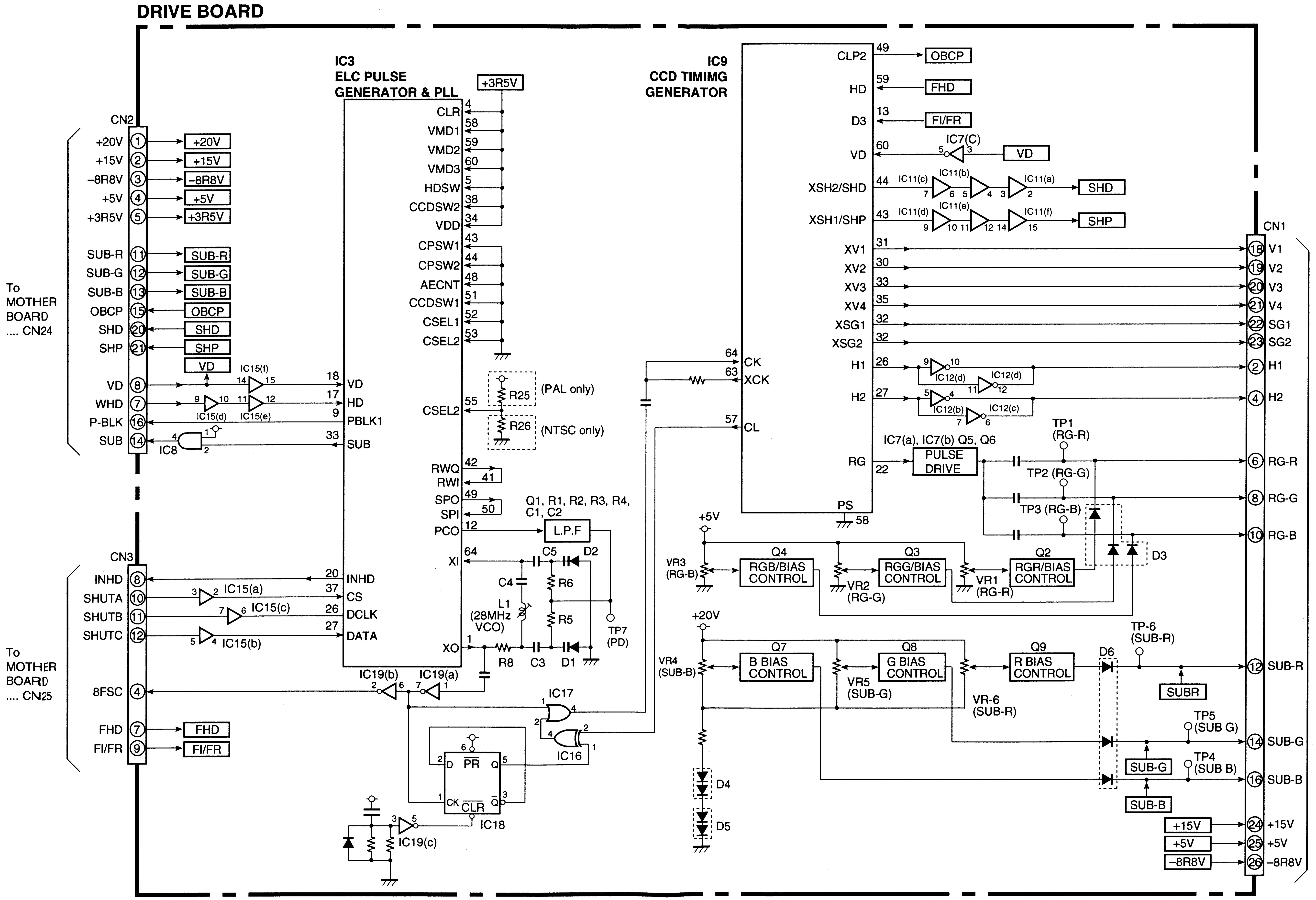

R SAMPLE HOLD
R PREVIDEO AMP
G SAMPLE HOLD
G PREVIDEO AMP
B SAMPLE HOLD
B PREVIDEO AMP
To SENSOR BOARD CN2
CN10
R IN
G IN
B IN
To MOTHER BOARD CN23
CN11
SHD
SHP
TP501 (R IN)
Q501 PREAMP
Q502 SAMPLE HOLD GATE
Q503, 504 AMP
Q505 SAMPLE HOLD GATE
Q506 BUFFER
Q507–510 BIAS CONTROL
VR501 (R DC)
CT501 (R FREQ)
Q511 BIAS GENERATOR
Q517, 518 BUFFER
Q519 SAMPLE HOLD GATE
Q520 BIAS DRIVE
Q512–Q514 AMP
CF501, CF502 TRAP
Q515, Q516 BUFFER
TP502 (R OUT)
TP601 (G IN)
Q601 PREAMP
Q602 SAMPLE HOLD GATE
Q603, 604 AMP
Q605 SAMPLE HOLD GATE
Q606 BUFFER
Q607–610 BIAS CONTROL
VR601 (G DC)
CT601 (G FREQ)
Q611 BIAS GENERATOR
Q617, 618 BUFFER
Q619 SAMPLE HOLD GATE
Q620 BIAS DRIVE
Q612–Q614 AMP
CF601, CF602 TRAP
Q615, Q616 BUFFER
TP602 (G OUT)
TP701 (B IN)
Q701 PREAMP
Q702 SAMPLE HOLD GATE
Q703, 704 AMP
Q705 SAMPLE HOLD GATE
Q706 BUFFER
Q707–710 BIAS CONTROL
VR701 (B DC)
CT701 (B FREQ)
Q711 BIAS GENERATOR
Q717, 718 BUFFER
Q719 SAMPLE HOLD GATE
Q720 BIAS DRIVE
Q712–Q714 AMP
CF701, CF702 TRAP
Q715, Q716 BUFFER
TP702 (B OUT)
SHP
SHD
BIAS(1)
+7V
– 5V
– 5V REGULATOR
+7V REGULATOR
Q401 BIAS GENERATOR
CN12
⑨ R OUT
⑬ G OUT
⑰ B OUT
㉑ –5V
㉒ –5V
⑤ +7V
⑥ +7V
To MOTHER BOARD CN22

BLOCK DIAGRAM OF PREPROCESS BOARD

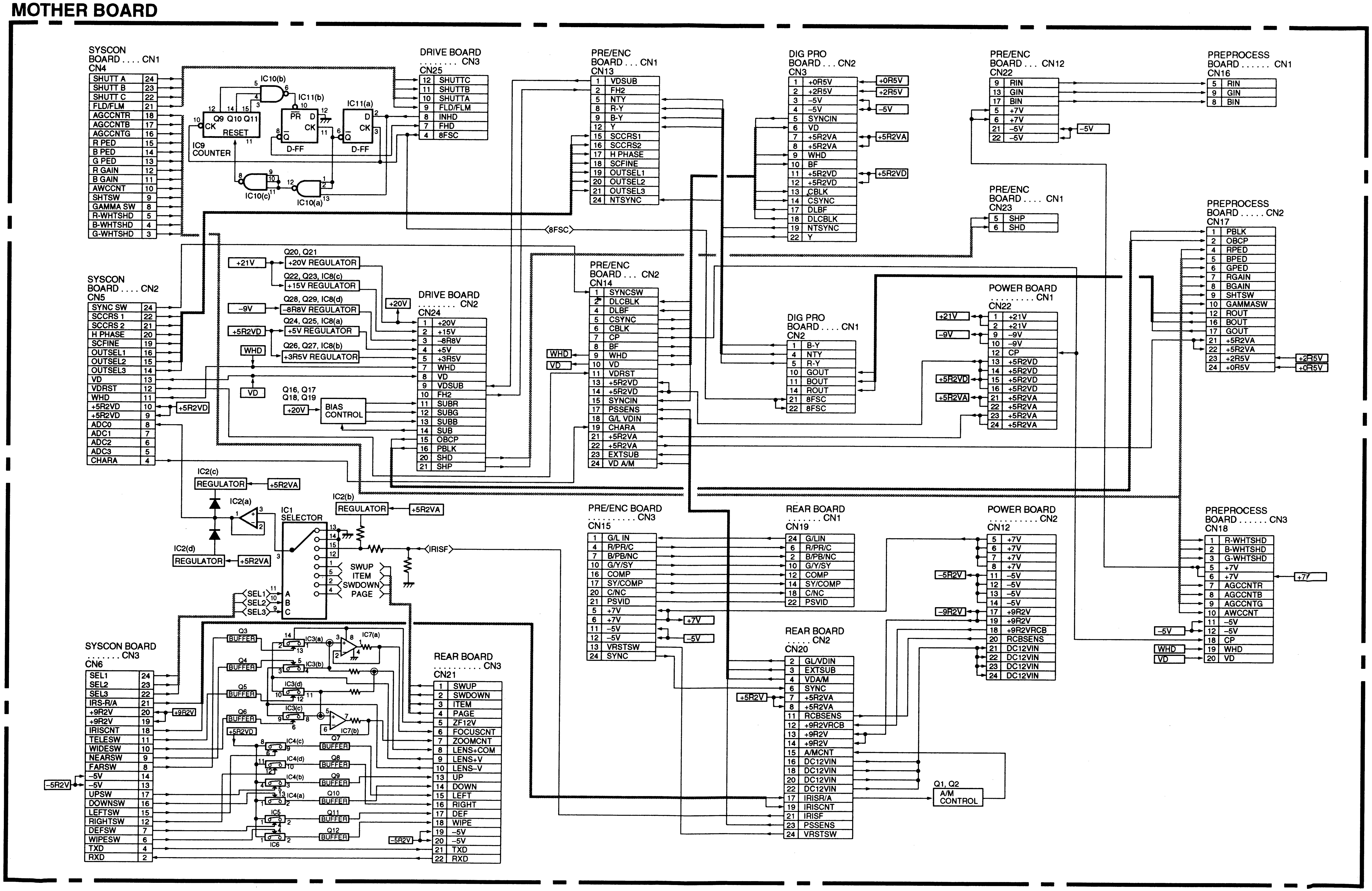

PREPROCESS BOARD
R CHANNEL PREPROCESS
G CHANNEL PREPROCESS
B CHANNEL PREPROCESS
CN1
RIN
GIN
BIN
TP101 (RIN)
Q101-Q104, IC101(b)
AMP.
TP102 (RGAIN-1)
IC102(b) SELECTOR
IC102(a) SELECTOR
VR101 (RGAIN-1)
OB
PB
RS
SH
R RED
VR103 (R PULSE CANCEL)
VR102 (R SHUTTER)
Q105-Q108, Q110, IC103(b)
GAIN CONTROL
Q111 IC103(a)
PEDESTAL LEVEL CONTROL
AGCCNTR
VR106 (R PED)
CP0
VR111 (2000K WB)
R GAIN
VR104 (R GAIN-2)
VR105 (R 18dB GAIN)
IC104 SELECTOR
+0R5V
Q112-Q124
TP103 (R GAIN-2)
PRE GAMMA
A
B
C
D
VR107 (R KNEE)
VR108 (R GAMMA MAX)
IC105 SELECTOR
GA
VR109 (R CROSS)
Q125-Q128, IC106(b)
AMP
CPO
VR110 (R GAMMA MIN)
TP106 (R GAMMA)
R OUT
R PED
R GAIN
SHT SW
GAMMA SW
PBLK
OBCP
IC1(a)
VR1(c)
VR1(b)
To MOTHER BOARD CN16
To MOTHER BOARD CN17
To MOTHER BOARD CN18
G OUT
G PED
+5R2VA
+2R5V
+0R5V
B OUT
B PED
B GAIN
VOLTAGE REGULATOR
Q1, IC3(c)
+0R5V REGULATOR
+6R7V REGULATOR
+2R5V REGULATOR
-4R6V REGULATOR
Q2, IC3(a)
-2R5V
-4R6V
-4R5V
+6R7V REGULATOR
Q3, IC3(d)
CN3(a)
+7V
-5R2V
CN3(b)
AGCCNTR
AGCCNTB
AGCCNTG
AWCCNT
CP
VD
IC1(d)
IC1(f)
IC1(e)
CP1
DVD
SHADING GENERATOR
Q6
BIAS
Q8, Q9, Q11
HSAW GENERATOR
Q12, Q14, Q16
VSAW GENERATOR
Q7, Q10
H TOP GENERATOR
Q13, Q15
VTOP GENERATOR
IC6(a)
IC6(b)
IC6(c)
IC6(d)
BUFFER
RS
GS
BS
VOLTAGE REGULATOR
2.1V
1.1V
0.5V
0.8V
+4R5V
IC7 SELECTOR
IC8(a)
IC8(b)
IC8(c)
IC8(d)
AWC CNT

VR1	H TOP SHADING
VR2	V TOP SHADING
VR3	R H SHADING (SAW)
VR4	R V SHADING (SAW)
VR5	R H TOP SHADING
VR6	R V TOP SHADING
VR7	G H SHADING (SAW)
VR8	G V SHADING (SAW)
VR9	G H TOP SHADING
VR10	G V TOP SHADING
VR11	B H SHADING (SAW)
VR12	B V SHADING (SAW)
VR13	B H TOP SHADING
VR14	B V TOP SHADING

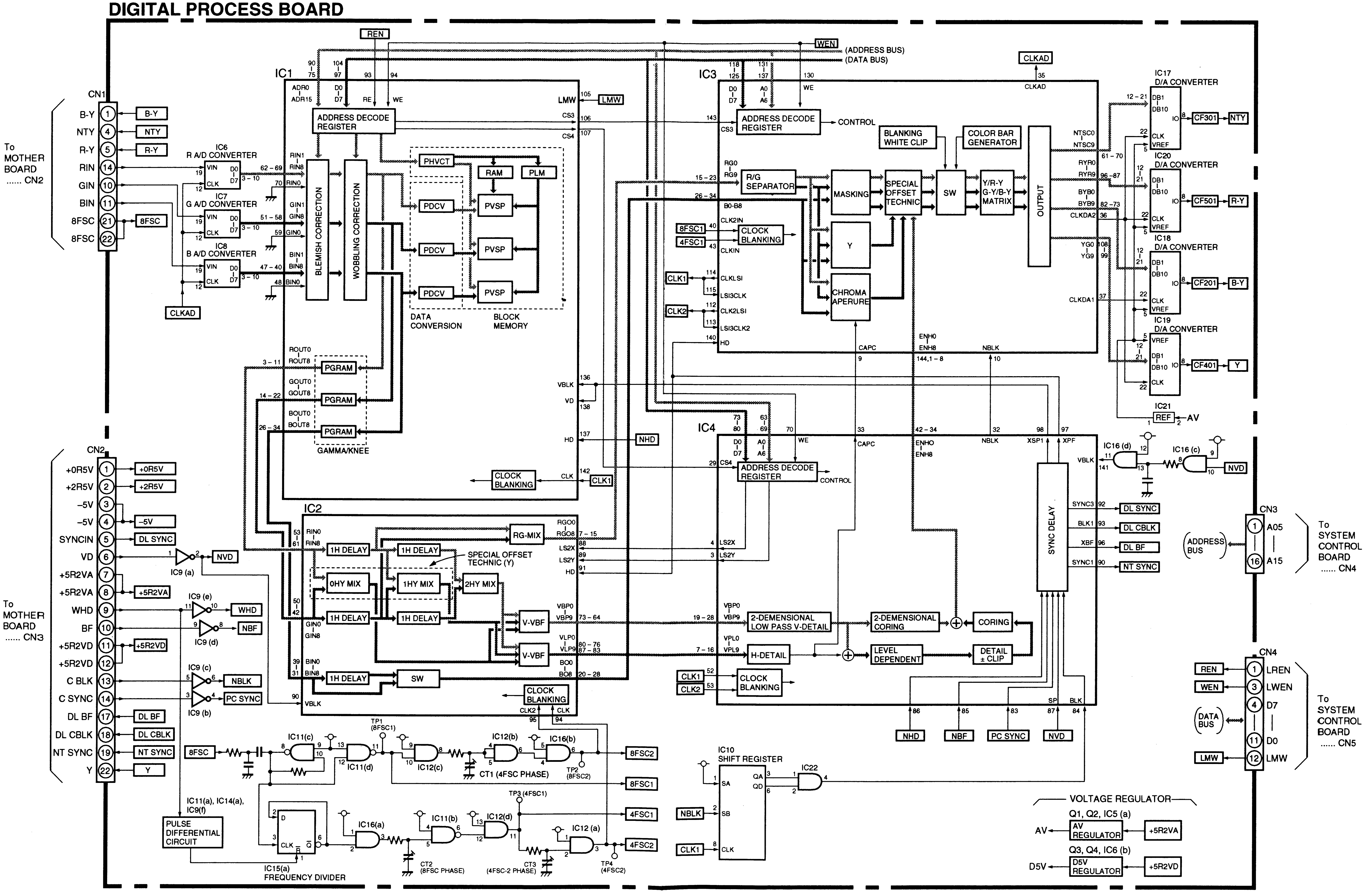
BLOCK DIAGRAM OF DRIVE BOARD


DRIVE BOARD
IC3
ELC PULSE GENERATOR & PLL
IC9
CCD TIMIMG GENERATOR
CN2
+20V ① +20V
+15V ② +15V
–8R8V ③ –8R8V
+5V ④ +5V
+3R5V ⑤ +3R5V
SUB-R ⑪ SUB-R
SUB-G ⑫ SUB-G
SUB-B ⑬ SUB-B
OBCP ⑮ OBCP
SHD ⑳ SHD
SHP ㉑ SHP
VD ⑧ VD
WHD ⑦
P-BLK ⑯
SUB ⑭
To MOTHER BOARD CN24
IC15(f) 14 15
IC15(d) 9 10
IC15(e) 11 12
IC8 4 1 2
18 VD
17 HD
9 PBLK1
33 SUB
+3R5V
4 CLR
58 VMD1
59 VMD2
60 VMD3
5 HDSW
38 CCDSW2
34 VDD
43 CPSW1
44 CPSW2
48 AECNT
51 CCDSW1
52 CSEL1
53 CSEL2
R25 (PAL only)
55 CSEL2
R26 (NTSC only)
42 RWQ
41 RWI
49 SPO
50 SPI
12 PCO
Q1, R1, R2, R3, R4, C1, C2
L.P.F
64 XI
C5 D2
C4 R6
L1 (28MHz VCO)
R5
TP7 (PD)
1 XO
R8 C3 D1
CN3
INHD ⑧
SHUTA ⑩
SHUTB ⑪
SHUTC ⑫
8FSC ④
FHD ⑦ FHD
FI/FR ⑨ FI/FR
To MOTHER BOARD CN25
20 INHD
3 2 IC15(a) 37 CS
7 6 IC15(c) 26 DCLK
5 4 IC15(b) 27 DATA
IC19(b) 2 6
IC19(a) 7 1
IC17 1 2 4
IC16 4 2 1
IC18 6 PR 2 D 5 Q 1 CK CLR 3 Q̄
IC19(c) 3 5
64 CK
63 XCK
57 CL
49 CLP2 OBCP
59 HD FHD
13 D3 FI/FR
60 VD IC7(C) 5 3 VD
44 XSH2/SHD IC11(c) IC11(b) IC11(a) 7 6 5 4 3 2 SHD
43 XSH1/SHP IC11(d) IC11(e) IC11(f) 9 10 11 12 14 15 SHP
31 XV1
30 XV2
33 XV3
35 XV4
32 XSG1
32 XSG2
26 H1 9 10 IC12(d) 11 12
27 H2 5 4 IC12(b) IC12(c) 7 6
IC7(a), IC7(b) Q5, Q6
22 RG PULSE DRIVE
PS 58
TP1 (RG-R)
TP2 (RG-G)
TP3 (RG-B)
D3
+5V
VR3 (RG-B)
Q4 RGB/BIAS CONTROL
VR2 (RG-G)
Q3 RGG/BIAS CONTROL
VR1 (RG-R)
Q2 RGR/BIAS CONTROL
+20V
VR4 (SUB-B)
Q7 B BIAS CONTROL
VR5 (SUB-G)
Q8 G BIAS CONTROL
VR-6 (SUB-R)
Q9 R BIAS CONTROL
D6
TP-6 (SUB-R)
SUBR
TP5 (SUB G)
TP4 (SUB B)
SUB-G
SUB-B
D4
D5
+15V
+5V
–8R8V
CN1
⑱ V1
⑲ V2
⑳ V3
㉑ V4
㉒ SG1
㉓ SG2
② H1
④ H2
⑥ RG-R
⑧ RG-G
⑩ RG-B
⑫ SUB-R
⑭ SUB-G
⑯ SUB-B
㉔ +15V
㉕ +5V
㉖ –8R8V
To SENSOR BOARD CN1

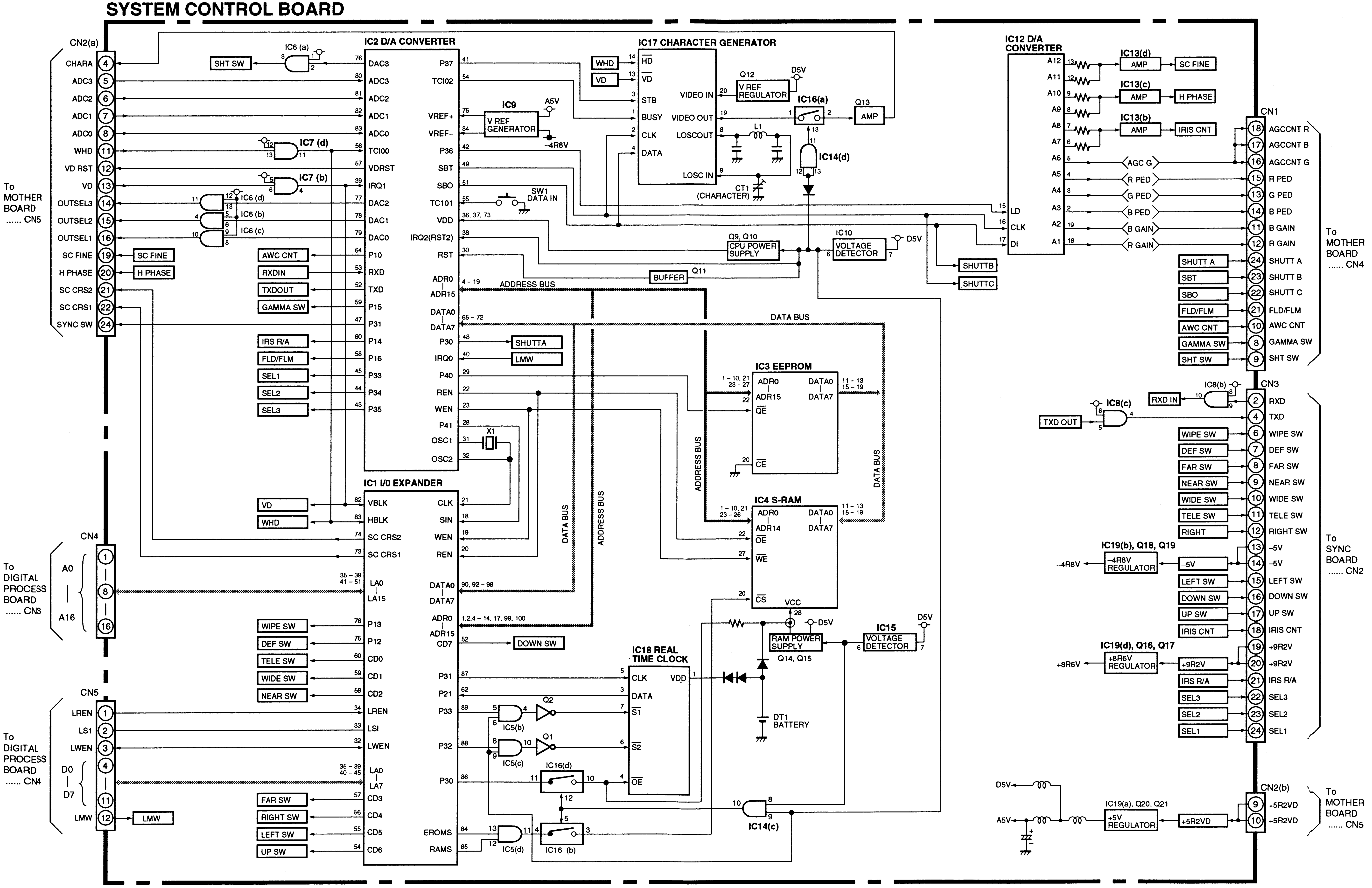
BLOCK DIAGRAM OF MOTHER BOARD


MOTHER BOARD
SYSCON BOARD CN1
CN4
SHUTT A 24
SHUTT B 23
SHUTT C 22
FLD/FLM 21
AGCCNTR 18
AGCCNTB 17
AGCCNTG 16
R PED 15
B PED 14
G PED 13
R GAIN 12
B GAIN 11
AWCCNT 10
SHTSW 9
GAMMA SW 8
R-WHTSHD 5
B-WHTSHD 4
G-WHTSHD 3
IC10(b)
IC11(b)
IC11(a)
Q9 Q10 Q11
CK
RESET
IC9
COUNTER
PR D
CK
Q
D-FF
IC10(c)
IC10(a)
DRIVE BOARD CN3
CN25
12 SHUTTC
11 SHUTTB
10 SHUTTA
9 FLD/FLM
8 INHD
7 FHD
4 8FSC
PRE/ENC BOARD ... CN1
CN13
1 VDSUB
2 FH2
5 NTY
8 R-Y
9 B-Y
12 Y
15 SCCRS1
16 SCCRS2
17 H PHASE
18 SCFINE
19 OUTSEL1
20 OUTSEL2
21 OUTSEL3
24 NTSYNC
DIG PRO BOARD ... CN2
CN3
1 +0R5V
2 +2R5V
3 –5V
4 –5V
5 SYNCIN
6 VD
7 +5R2VA
8 +5R2VA
9 WHD
10 BF
11 +5R2VD
12 +5R2VD
13 CBLK
14 CSYNC
17 DLBF
18 DLCBLK
19 NTSYNC
22 Y
+0R5V
+2R5V
–5V
+5R2VA
+5R2VD
PRE/ENC BOARD ... CN12
CN22
9 RIN
13 GIN
17 BIN
5 +7V
6 +7V
21 –5V
22 –5V
–5V
PREPROCESS BOARD CN1
CN16
5 RIN
9 GIN
8 BIN
PRE/ENC BOARD CN1
CN23
5 SHP
6 SHD
PREPROCESS BOARD CN2
CN17
1 PBLK
2 OBCP
4 RPED
5 BPED
6 GPED
7 RGAIN
8 BGAIN
9 SHTSW
10 GAMMASW
12 ROUT
16 BOUT
17 GOUT
21 +5R2VA
22 +5R2VA
23 +2R5V
24 +0R5V
+2R5V
+0R5V
8FSC
SYSCON BOARD CN2
CN5
SYNC SW 24
SCCRS 1 22
SCCRS 2 21
H PHASE 20
SCFINE 19
OUTSEL1 16
OUTSEL2 15
OUTSEL3 14
VD 13
VDRST 12
WHD 11
+5R2VD 10
+5R2VD 9
ADC0 8
ADC1 7
ADC2 6
ADC3 5
CHARA 4
+5R2VD
Q20, Q21
+21V
+20V REGULATOR
Q22, Q23, IC8(c)
+15V REGULATOR
Q28, Q29, IC8(d)
–9V
–8R8V REGULATOR
Q24, Q25, IC8(a)
+5R2VD
+5V REGULATOR
Q26, Q27, IC8(b)
WHD
+3R5V REGULATOR
VD
Q16, Q17
Q18, Q19
+20V
BIAS CONTROL
+20V
DRIVE BOARD CN2
CN24
1 +20V
2 +15V
3 –8R8V
4 +5V
5 +3R5V
7 WHD
8 VD
9 VDSUB
10 FH2
11 SUBR
12 SUBG
13 SUBB
14 SUB
15 OBCP
16 PBLK
20 SHD
21 SHP
PRE/ENC BOARD ... CN2
CN14
1 SYNCSW
2 DLCBLK
4 DLBF
5 CSYNC
6 CBLK
7 CP
8 BF
9 WHD
10 VD
11 VDRST
13 +5R2VD
14 +5R2VD
15 SYNCIN
16 PSSENS
18 G/L VDIN
19 CHARA
21 +5R2VA
22 +5R2VA
23 EXTSUB
24 VD A/M
WHD
VD
DIG PRO BOARD CN1
CN2
1 B-Y
4 NTY
5 R-Y
10 GOUT
11 BOUT
14 ROUT
21 8FSC
22 8FSC
POWER BOARD CN1
CN22
1 +21V
2 +21V
9 –9V
10 –9V
12 CP
13 +5R2VD
14 +5R2VD
15 +5R2VD
16 +5R2VD
21 +5R2VA
22 +5R2VA
23 +5R2VA
24 +5R2VA
+21V
–9V
+5R2VD
+5R2VA
IC2(c)
REGULATOR
+5R2VA
IC2(a)
IC2(b)
REGULATOR
+5R2VA
IC1 SELECTOR
IRISF
SWUP
ITEM
SWDOWN
PAGE
SEL1
SEL2
SEL3
A
B
C
IC2(d)
REGULATOR
+5R2VA
PRE/ENC BOARD CN3
CN15
1 G/L IN
4 R/PR/C
7 B/PB/NC
10 G/Y/SY
16 COMP
17 SY/COMP
20 C/NC
21 PSVID
5 +7V
6 +7V
11 –5V
12 –5V
13 VRSTSW
24 SYNC
+7V
–5V
REAR BOARD CN1
CN19
24 G/LIN
6 R/PR/C
2 B/PB/NC
10 G/Y/SY
12 COMP
14 SY/COMP
18 C/NC
22 PSVID
POWER BOARD CN2
CN12
5 +7V
6 +7V
7 +7V
8 +7V
11 –5V
12 –5V
13 –5V
14 –5V
17 +9R2V
19 +9R2V
18 +9R2VRCB
20 RCBSENS
21 DC12VIN
22 DC12VIN
23 DC12VIN
24 DC12VIN
–5R2V
–9R2V
PREPROCESS BOARD CN3
CN18
1 R-WHTSHD
2 B-WHTSHD
3 G-WHTSHD
5 +7V
6 +7V
7 AGCCNTR
8 AGCCNTB
9 AGCCNTG
10 AWCCNT
11 –5V
12 –5V
18 CP
19 WHD
20 VD
+7V
–5V
WHD
VD
REAR BOARD CN2
CN20
2 GL/VDIN
3 EXTSUB
4 VDA/M
6 SYNC
7 +5R2VA
8 +5R2VA
11 RCBSENS
12 +9R2VRCB
13 +9R2V
14 +9R2V
15 A/MCNT
16 DC12VIN
18 DC12VIN
20 DC12VIN
22 DC12VIN
17 IRISR/A
19 IRISCNT
21 IRISF
23 PSSENS
24 VRSTSW
+5R2V
Q1, Q2
A/M CONTROL
SYSCON BOARD CN3
CN6
SEL1 24
SEL2 23
SEL3 22
IRS-R/A 21
+9R2V 20
+9R2V 19
IRISCNT 18
TELESW 11
WIDESW 10
NEARSW 9
FARSW 8
–5V 14
–5V 13
UPSW 17
DOWNSW 16
LEFTSW 15
RIGHTSW 12
DEFSW 7
WIPESW 6
TXD 4
RXD 2
+9R2V
–5R2V
Q3 BUFFER
Q4 BUFFER
Q5 BUFFER
Q6 BUFFER
IC3(a)
IC3(b)
IC3(d)
IC3(c)
IC7(a)
IC7(b)
+5R2VD
IC4(c)
IC4(d)
IC4(b)
IC4(a)
IC5
IC6
Q7 BUFFER
Q8 BUFFER
Q9 BUFFER
Q10 BUFFER
Q11 BUFFER
Q12 BUFFER
–5R2V
REAR BOARD CN3
CN21
1 SWUP
2 SWDOWN
3 ITEM
4 PAGE
5 ZF12V
6 FOCUSCNT
7 ZOOMCNT
8 LENS+COM
9 LENS+V
10 LENS–V
13 UP
14 DOWN
15 LEFT
16 RIGHT
17 DEF
18 WIPE
19 –5V
20 –5V
21 TXD
22 RXD

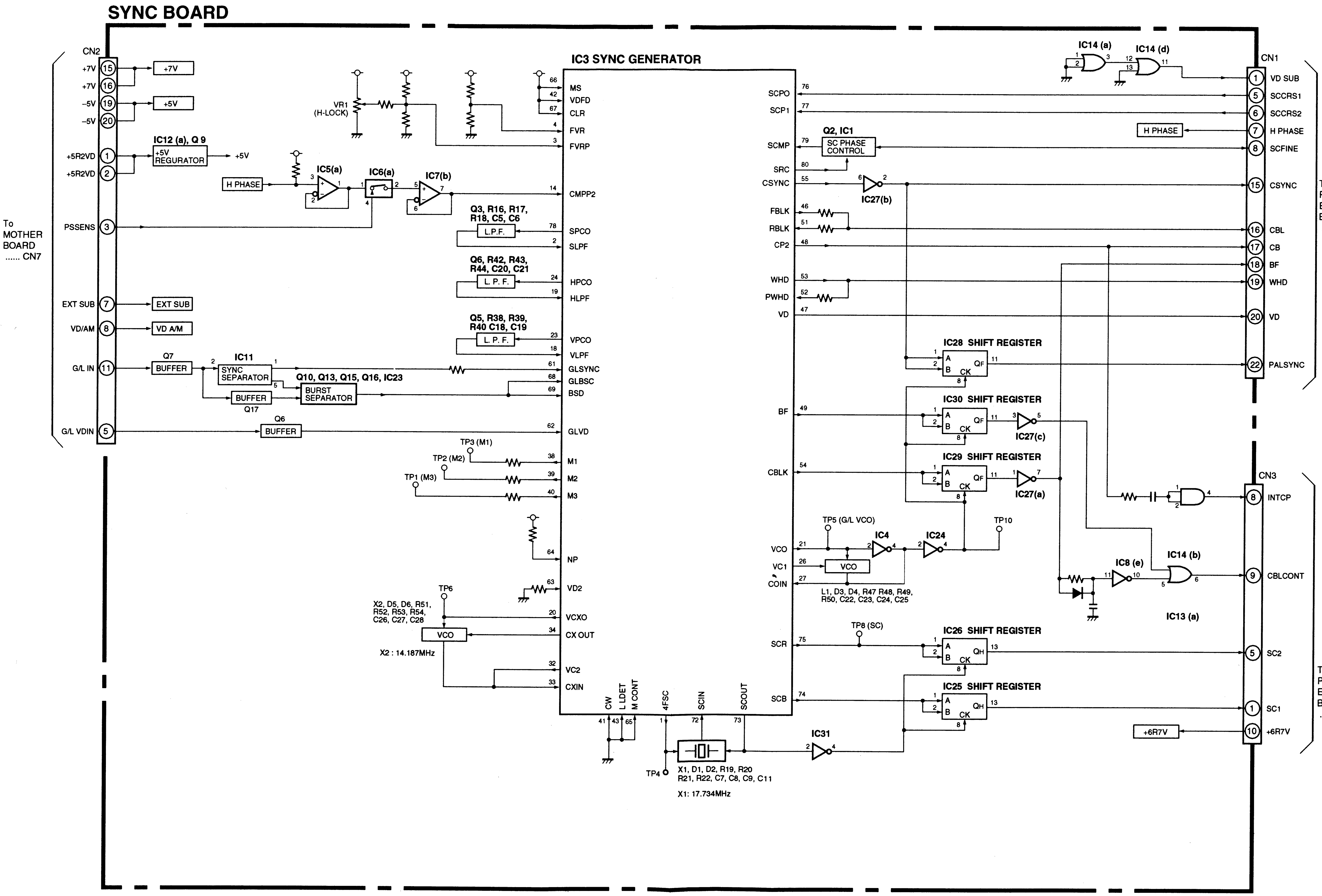
BLOCK DIAGRAM OF DIGITAL PROCESS BOARD


DIGITAL PROCESS BOARD
To MOTHER BOARD CN2
CN1
B-Y
NTY
R-Y
RIN
GIN
BIN
8FSC
8FSC
IC6 R A/D CONVERTER
IC7 G A/D CONVERTER
IC8 B A/D CONVERTER
VIN
CLK
D0 D7
CLKAD
IC1
ADR0 ADR15
D0 D7
RE
WE
REN
WEN
(ADDRESS BUS)
(DATA BUS)
LMW
ADDRESS DECODE REGISTER
CS3
CS4
RIN1 RIN8
RIN0
GIN1 GIN8
GIN0
BIN1 BIN8
BIN0
BLEMISH CORRECTION
WOBBLING CORRECTION
PHVCT
RAM
PLM
PDCV
PVSP
DATA CONVERSION
BLOCK MEMORY
ROUT0 ROUT8
GOUT0 GOUT8
BOUT0 BOUT8
PGRAM
GAMMA/KNEE
VBLK
VD
HD
NHD
CLOCK BLANKING
CLK
CLK1
IC2
1H DELAY
SPECIAL OFFSET TECHNIC (Y)
0HY MIX
1HY MIX
2HY MIX
RG-MIX
RGO0 RGO8
LS2X
LS2Y
VBP0 VBP9
VLP0 VLP9
BO0 BO8
V-VBF
SW
CLK2
IC3
CONTROL
BLANKING WHITE CLIP
COLOR BAR GENERATOR
R/G SEPARATOR
MASKING
SPECIAL OFFSET TECHNIC
Y/R-Y G-Y/B-Y MATRIX
OUTPUT
Y
CHROMA APERURE
8FSC1
4FSC1
CLKIN
CLKLSI
LSI3CLK
CLK2LSI
LSI3CLK2
CAPC
ENH0 ENH8
NBLK
NTSC0 NTSC9
RYR0 RYR9
BYB0 BYB9
CLKDA2
YG0 YG9
CLKDA1
IC17 D/A CONVERTER
IC20 D/A CONVERTER
IC18 D/A CONVERTER
IC19 D/A CONVERTER
DB1 DB10
VREF
IO
CF301
CF501
CF201
CF401
IC21
REF
AV
IC4
XSP1
XPF
IC16 (d)
IC16 (c)
NVD
SYNC DELAY
SYNC3
BLK1
XBF
SYNC1
DL SYNC
DL CBLK
DL BF
NT SYNC
2-DEMENSIONAL LOW PASS V-DETAIL
2-DEMENSIONAL CORING
CORING
H-DETAIL
LEVEL DEPENDENT
DETAIL ± CLIP
SP
BLK
NBF
PC SYNC
CN3
(ADDRESS BUS)
A05
A15
To SYSTEM CONTROL BOARD CN4
CN4
LREN
LWEN
(DATA BUS)
D7
D0
LMW
To SYSTEM CONTROL BOARD CN5
CN2
+0R5V
+2R5V
–5V
SYNCIN
VD
+5R2VA
WHD
BF
+5R2VD
C BLK
C SYNC
To MOTHER BOARD CN3
IC9 (a)
IC9 (e)
IC9 (d)
IC9 (c)
IC9 (b)
IC11(c)
IC11(d)
IC12(c)
IC12(b)
IC16(b)
TP1 (8FSC1)
TP2 (8FSC2)
CT1 (4FSC PHASE)
8FSC2
IC11(a), IC14(a), IC9(f)
PULSE DIFFERENTIAL CIRCUIT
IC15(a) FREQUENCY DIVIDER
IC16(a)
IC11(b)
IC12(d)
IC12 (a)
TP3 (4FSC1)
TP4 (4FSC2)
CT2 (8FSC PHASE)
CT3 (4FSC-2 PHASE)
4FSC2
IC10 SHIFT REGISTER
SA
SB
QA
QD
IC22
VOLTAGE REGULATOR
Q1, Q2, IC5 (a)
AV REGULATOR
Q3, Q4, IC6 (b)
D5V REGULATOR
D5V

BLOCK DIAGRAM OF SYSTEM CONTROL BOARD

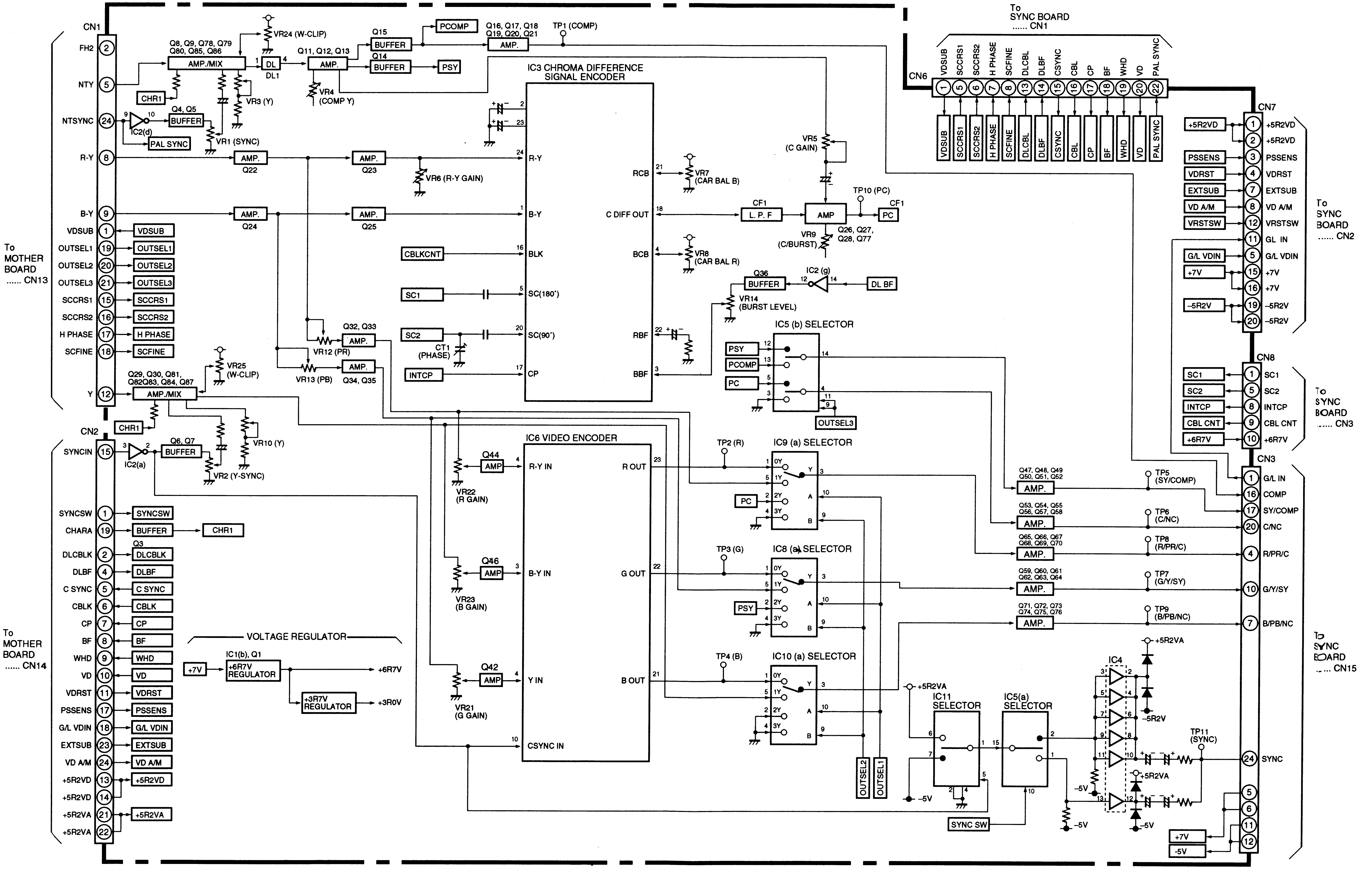

SYSTEM CONTROL BOARD
CN2(a)
CHARA 4
ADC3 5
ADC2 6
ADC1 7
ADC0 8
WHD 11
VD RST 12
VD 13
OUTSEL3 14
OUTSEL2 15
OUTSEL1 16
SC FINE 19
H PHASE 20
SC CRS2 21
SC CRS1 22
SYNC SW 24
To MOTHER BOARD CN5
SHT SW
IC6 (a)
IC7 (d)
IC7 (b)
IC6 (d)
IC6 (b)
IC6 (c)
SC FINE
H PHASE
IC2 D/A CONVERTER
DAC3
ADC3
ADC2
ADC1
ADC0
TCI00
VDRST
IRQ1
DAC2
DAC1
DAC0
P10
RXD
TXD
P15
P31
P14
P16
P33
P34
P35
P37
TCI02
VREF+
VREF–
P36
SBT
SBO
TC101
VDD
IRQ2(RST2)
RST
ADR0 – ADR15
DATA0 – DATA7
P30
IRQ0
P40
REN
WEN
P41
OSC1
OSC2
AWC CNT
RXDIN
TXDOUT
GAMMA SW
IRS R/A
FLD/FLM
SEL1
SEL2
SEL3
IC9
V REF GENERATOR
A5V
–4R8V
SW1 DATA IN
X1
SHUTTA
LMW
ADDRESS BUS
DATA BUS
BUFFER
Q11
Q9, Q10 CPU POWER SUPPLY
IC10 VOLTAGE DETECTOR
D5V
IC17 CHARACTER GENERATOR
WHD
VD
HD
VD
STB
BUSY
CLK
DATA
VIDEO IN
VIDEO OUT
LOSCOUT
LOSC IN
Q12 V REF REGULATOR
D5V
IC16(a)
Q13 AMP
L1
CT1 (CHARACTER)
IC14(d)
IC12 D/A CONVERTER
A12
A11
A10
A9
A8
A7
A6
A5
A4
A3
A2
A1
LD
CLK
DI
IC13(d) AMP
SC FINE
IC13(c) AMP
H PHASE
IC13(b) AMP
IRIS CNT
AGC G
R PED
G PED
B PED
B GAIN
R GAIN
SHUTTB
SHUTTC
CN1
AGCCNT R 18
AGCCNT B 17
AGCCNT G 16
R PED 15
G PED 13
B PED 14
B GAIN 11
R GAIN 12
SHUTT A 24
SHUTT B 23
SHUTT C 22
FLD/FLM 21
AWC CNT 10
GAMMA SW 8
SHT SW 9
To MOTHER BOARD CN4
SHUTT A
SBT
SBO
FLD/FLM
AWC CNT
GAMMA SW
SHT SW
IC3 EEPROM
ADR0 – ADR15
DATA0 – DATA7
OE
CE
IC4 S-RAM
ADR0 – ADR14
DATA0 – DATA7
OE
WE
CS
VCC
ADDRESS BUS
DATA BUS
IC1 I/0 EXPANDER
VBLK
HBLK
SC CRS2
SC CRS1
LA0 – LA15
P13
P12
CD0
CD1
CD2
LREN
LSI
LWEN
LA0 – LA7
CD3
CD4
CD5
CD6
CLK
SIN
WEN
REN
DATA0 – DATA7
ADR0 – ADR15
CD7
P31
P21
P33
P32
P30
EROMS
RAMS
VD
WHD
DOWN SW
WIPE SW
DEF SW
TELE SW
WIDE SW
NEAR SW
FAR SW
RIGHT SW
LEFT SW
UP SW
CN4
To DIGITAL PROCESS BOARD CN3
A0 – A16
1
8
16
CN5
To DIGITAL PROCESS BOARD CN4
LREN 1
LS1 2
LWEN 3
D0 – D7
4
11
LMW 12
LMW
IC5(b)
Q2
IC5(c)
Q1
IC16(d)
IC5(d)
IC16 (b)
IC14(c)
IC18 REAL TIME CLOCK
CLK
DATA
S1
S2
OE
VDD
RAM POWER SUPPLY
Q14, Q15
D5V
DT1 BATTERY
IC15 VOLTAGE DETECTOR
D5V
IC8(b)
RXD IN
IC8(c)
TXD OUT
CN3
RXD 2
TXD 4
WIPE SW 6
DEF SW 7
FAR SW 8
NEAR SW 9
WIDE SW 10
TELE SW 11
RIGHT SW 12
–5V 13
–5V 14
LEFT SW 15
DOWN SW 16
UP SW 17
IRIS CNT 18
+9R2V 19
+9R2V 20
IRS R/A 21
SEL3 22
SEL2 23
SEL1 24
To SYNC BOARD CN2
WIPE SW
DEF SW
FAR SW
NEAR SW
WIDE SW
TELE SW
RIGHT
IC19(b), Q18, Q19
–4R8V REGULATOR
–4R8V
–5V
LEFT SW
DOWN SW
UP SW
IRIS CNT
IC19(d), Q16, Q17
+8R6V REGULATOR
+8R6V
+9R2V
IRS R/A
SEL3
SEL2
SEL1
D5V
A5V
IC19(a), Q20, Q21
+5V REGULATOR
+5R2VD
CN2(b)
+5R2VD 9
+5R2VD 10
To MOTHER BOARD CN5

BLOCK DIAGRAM OF SYNC BOARD


SYNC BOARD
CN2
+7V 15
+7V 16
–5V 19
–5V 20
+7V
+5V
+5R2VD 1
+5R2VD 2
IC12 (a), Q 9
+5V REGURATOR
+5V
PSSENS 3
EXT SUB 7
EXT SUB
VD/AM 8
VD A/M
G/L IN 11
Q7
BUFFER
IC11
SYNC SEPARATOR
BUFFER
Q17
Q10, Q13, Q15, Q16, IC23
BURST SEPARATOR
G/L VDIN 5
Q6
BUFFER
To MOTHER BOARD CN7
VR1 (H-LOCK)
H PHASE
IC5(a)
IC6(a)
IC7(b)
Q3, R16, R17, R18, C5, C6
L.P.F.
Q6, R42, R43, R44, C20, C21
L. P. F.
Q5, R38, R39, R40 C18, C19
L. P. F.
TP3 (M1)
TP2 (M2)
TP1 (M3)
TP6
X2, D5, D6, R51, R52, R53, R54, C26, C27, C28
VCO
X2 : 14.187MHz
IC3 SYNC GENERATOR
MS
VDFD
CLR
FVR
FVRP
CMPP2
SPCO
SLPF
HPCO
HLPF
VPCO
VLPF
GLSYNC
GLBSC
BSD
GLVD
M1
M2
M3
NP
VD2
VCXO
CX OUT
VC2
CXIN
CW
L LDET
M CONT
4FSC
SCIN
SCOUT
SCPO
SCP1
SCMP
SRC
CSYNC
FBLK
RBLK
CP2
WHD
PWHD
VD
BF
CBLK
VCO
VC1
COIN
SCR
SCB
TP4
X1, D1, D2, R19, R20 R21, R22, C7, C8, C9, C11
X1: 17.734MHz
Q2, IC1
SC PHASE CONTROL
IC27(b)
IC28 SHIFT REGISTER
IC30 SHIFT REGISTER
IC27(c)
IC29 SHIFT REGISTER
IC27(a)
TP5 (G/L VCO)
IC4
IC24
TP10
VCO
L1, D3, D4, R47 R48, R49, R50, C22, C23, C24, C25
IC8 (e)
IC14 (b)
IC13 (a)
TP8 (SC)
IC26 SHIFT REGISTER
IC25 SHIFT REGISTER
IC31
IC14 (a)
IC14 (d)
H PHASE
+6R7V
CN1
1 VD SUB
5 SCCRS1
6 SCCRS2
7 H PHASE
8 SCFINE
15 CSYNC
16 CBL
17 CB
18 BF
19 WHD
20 VD
22 PALSYNC
To PRE AMP/ ENCODER BOARD CN6
CN3
8 INTCP
9 CBLCONT
5 SC2
1 SC1
10 +6R7V
To PRE AMP/ ENCODER BOARD CN8

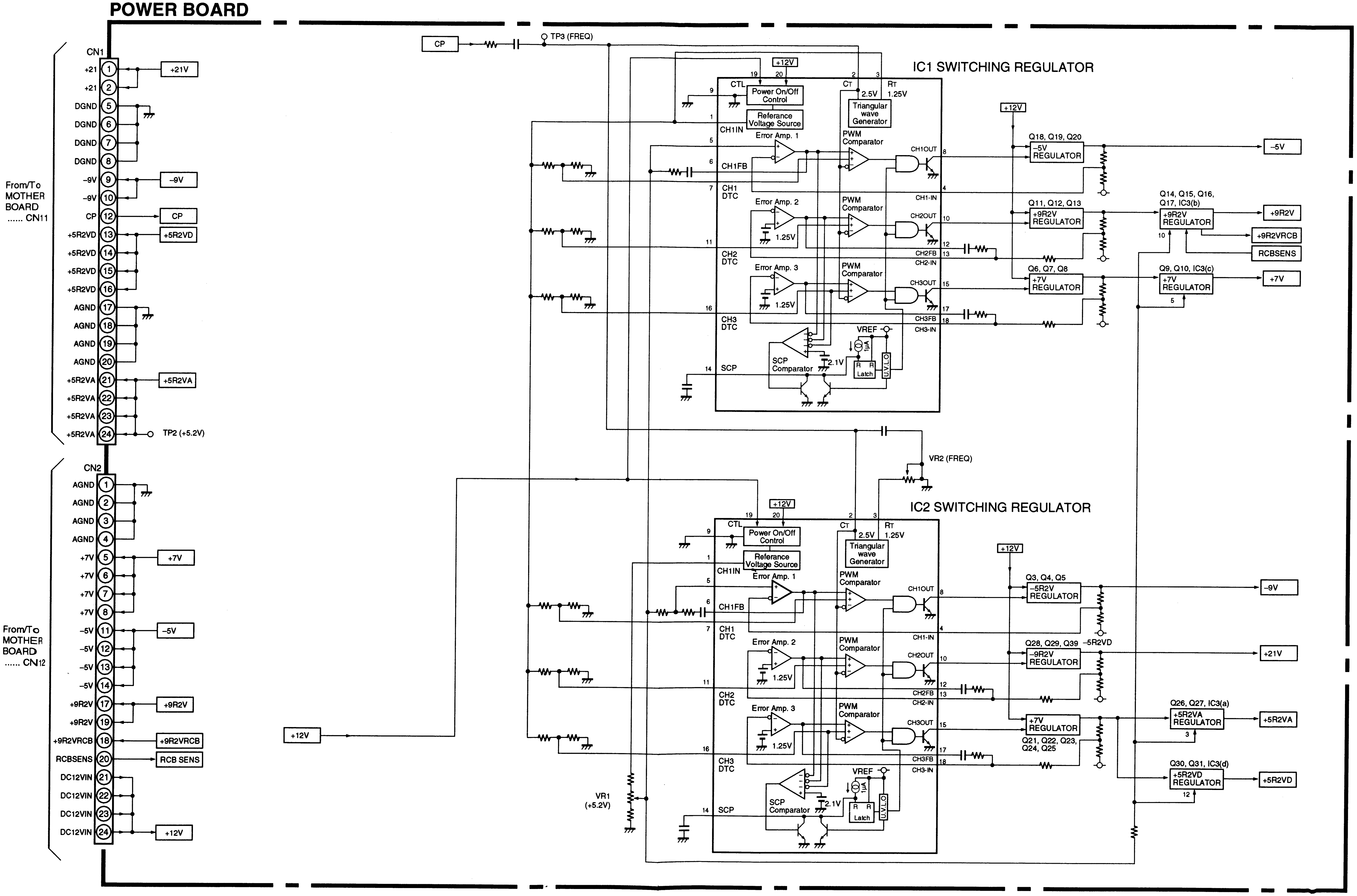
BLOCK DIAGRAM OF PREAMP/ENCODER BOARD (ENCODER SECTION)

ENCODER SECTION

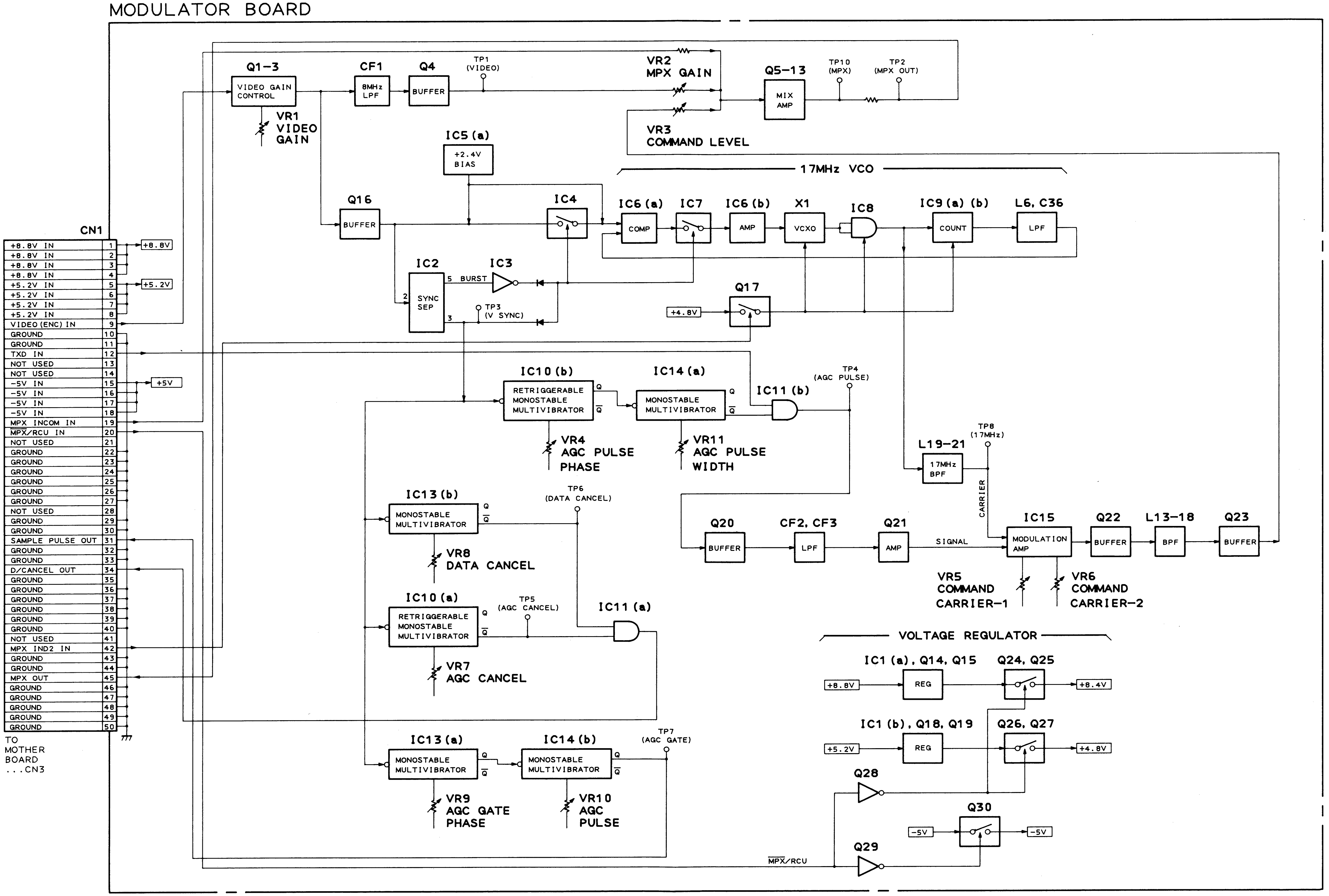


CN1
FH2 2
NTY 5
NTSYNC 24
R-Y 8
B-Y 9
VDSUB 1
OUTSEL1 19
OUTSEL2 20
OUTSEL3 21
SCCRS1 15
SCCRS2 16
H PHASE 17
SCFINE 18
Y 12
To MOTHER BOARD CN13
VR24 (W-CLIP)
Q8, Q9, Q78, Q79 Q80, Q85, Q86
AMP./MIX
CHR1
DL
DL1
Q11, Q12, Q13
AMP.
VR4 (COMP Y)
VR3 (Y)
Q15
BUFFER
Q14
BUFFER
PCOMP
PSY
Q16, Q17, Q18 Q19, Q20, Q21
AMP.
TP1 (COMP)
IC2(d)
Q4, Q5
BUFFER
VR1 (SYNC)
PAL SYNC
AMP. Q22
AMP. Q23
VR6 (R-Y GAIN)
AMP. Q24
AMP. Q25
CBLKCNT
SC1
SC2
CT1 (PHASE)
INTCP
Q32, Q33
AMP.
VR12 (PR)
VR13 (PB)
AMP.
Q34, Q35
VR25 (W-CLIP)
Q29, Q30, Q81, Q82Q83, Q84, Q87
AMP./MIX
CHR1
VR10 (Y)
IC3 CHROMA DIFFERENCE SIGNAL ENCODER
R-Y
B-Y
BLK
SC(180°)
SC(90°)
CP
RCB
C DIFF OUT
BCB
RBF
BBF
VR7 (CAR BAL B)
VR8 (CAR BAL R)
VR5 (C GAIN)
TP10 (PC)
CF1
L. P. F
AMP
CF1
PC
Q26, Q27, Q28, Q77
VR9 (C/BURST)
Q36
BUFFER
IC2 (g)
DL BF
VR14 (BURST LEVEL)
IC5 (b) SELECTOR
PSY
PCOMP
PC
OUTSEL3
CN2
SYNCIN 15
IC2(a)
Q6, Q7
BUFFER
VR2 (Y-SYNC)
SYNCSW 1
CHARA 19
DLCBLK 2
DLBF 4
C SYNC 5
CBLK 6
CP 7
BF 8
WHD 9
VD 10
VDRST 11
PSSENS 17
G/L VDIN 18
EXTSUB 23
VD A/M 24
+5R2VD 13
+5R2VD 14
+5R2VA 21
+5R2VA 22
To MOTHER BOARD CN14
SYNCSW
BUFFER
CHR1
Q3
DLCBLK
DLBF
C SYNC
CBLK
CP
BF
WHD
VD
VDRST
PSSENS
G/L VDIN
EXTSUB
VD A/M
+5R2VD
+5R2VA
VOLTAGE REGULATOR
+7V
IC1(b), Q1
+6R7V REGULATOR
+6R7V
+3R7V REGULATOR
+3R0V
IC6 VIDEO ENCODER
Q44 AMP
VR22 (R GAIN)
R-Y IN
R OUT
Q46 AMP
VR23 (B GAIN)
B-Y IN
G OUT
Q42 AMP
VR21 (G GAIN)
Y IN
B OUT
CSYNC IN
TP2 (R)
IC9 (a) SELECTOR
TP3 (G)
IC8 (a) SELECTOR
TP4 (B)
IC10 (a) SELECTOR
0Y 1Y 2Y 3Y Y A B
PC
PSY
OUTSEL2
OUTSEL1
Q47, Q48, Q49 Q50, Q51, Q52
AMP.
Q53, Q54, Q55 Q56, Q57, Q58
AMP.
Q65, Q66, Q67 Q68, Q69, Q70
AMP.
Q59, Q60, Q61 Q62, Q63, Q64
AMP.
Q71, Q72, Q73 Q74, Q75, Q76
AMP.
TP5 (SY/COMP)
TP6 (C/NC)
TP8 (R/PR/C)
TP7 (G/Y/SY)
TP9 (B/PB/NC)
+5R2VA
IC11 SELECTOR
IC5(a) SELECTOR
-5V
SYNC SW
IC4
+5R2VA
-5R2V
TP11 (SYNC)
+5R2VA
-5V
-5V
-5V
To SYNC BOARD CN1
CN6
VDSUB 1
SCCRS1 5
SCCRS2 6
H PHASE 7
SCFINE 8
DLCBL 13
DLBF 14
CSYNC 15
CBL 16
CP 17
BF 18
WHD 19
VD 20
PAL SYNC 22
VDSUB
SCCRS1
SCCRS2
H PHASE
SCFINE
DLCBL
DLBF
CSYNC
CBL
CP
BF
WHD
VD
PAL SYNC
CN7
+5R2VD
1 +5R2VD
2 +5R2VD
PSSENS
3 PSSENS
VDRST
4 VDRST
EXTSUB
7 EXTSUB
VD A/M
8 VD A/M
VRSTSW
12 VRSTSW
11 GL IN
G/L VDIN
5 G/L VDIN
+7V
15 +7V
16 +7V
-5R2V
19 -5R2V
20 -5R2V
To SYNC BOARD CN2
CN8
SC1
1 SC1
SC2
5 SC2
INTCP
8 INTCP
CBL CNT
9 CBL CNT
+6R7V
10 +6R7V
To SYNC BOARD CN3
CN3
1 G/L IN
16 COMP
17 SY/COMP
20 C/NC
4 R/PR/C
10 G/Y/SY
7 B/PB/NC
24 SYNC
5
6
11
12
+7V
-5V
To SYNC BOARD CN15

BLOCK DIAGRAM OF POWER BOARD

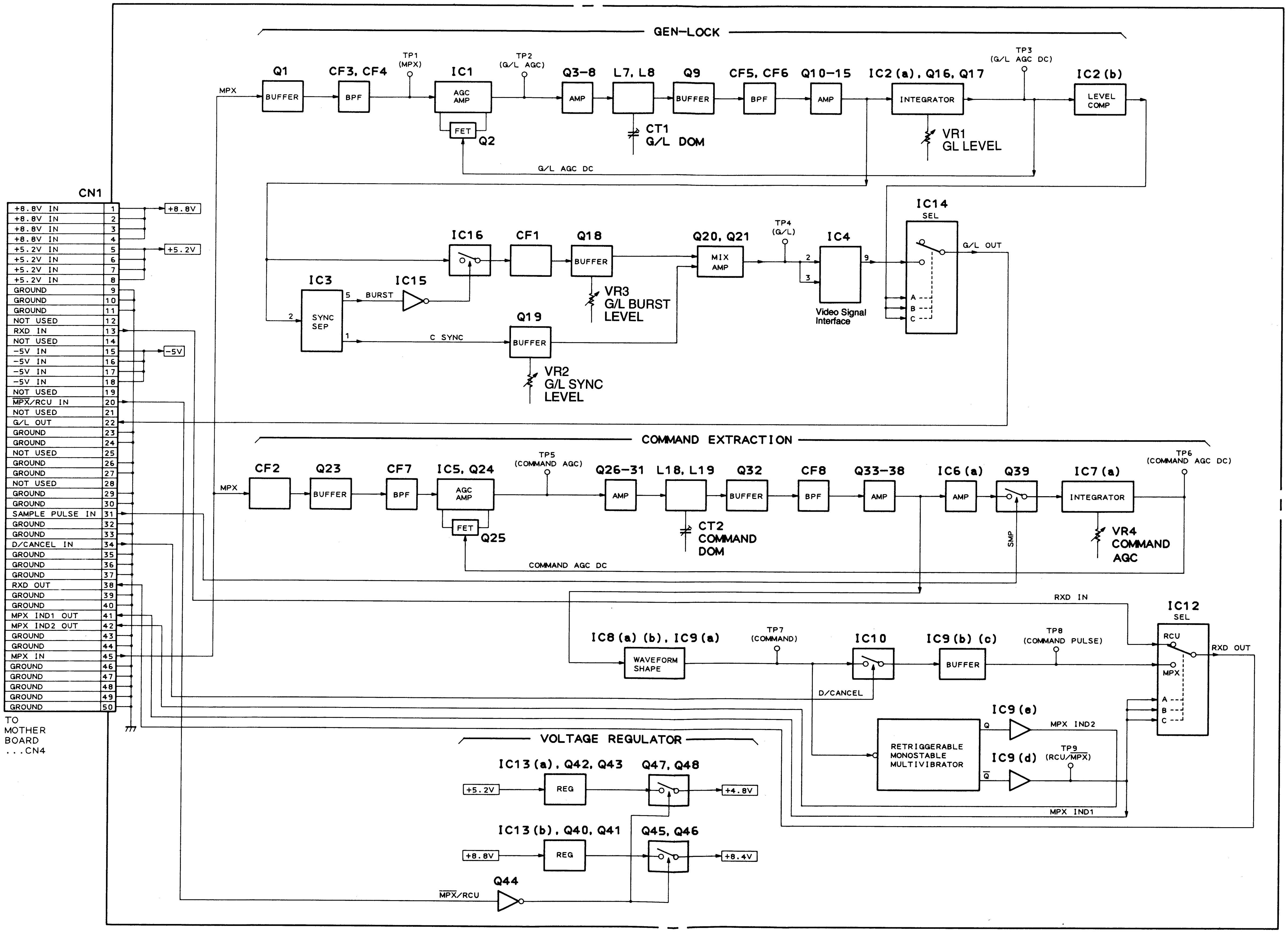

POWER BOARD
CN1
+21 1
+21 2
DGND 5
DGND 6
DGND 7
DGND 8
-9V 9
-9V 10
CP 12
+5R2VD 13
+5R2VD 14
+5R2VD 15
+5R2VD 16
AGND 17
AGND 18
AGND 19
AGND 20
+5R2VA 21
+5R2VA 22
+5R2VA 23
+5R2VA 24
From/To MOTHER BOARD CN11
+21V
-9V
CP
+5R2VD
+5R2VA
TP2 (+5.2V)
CN2
AGND 1
AGND 2
AGND 3
AGND 4
+7V 5
+7V 6
+7V 7
+7V 8
-5V 11
-5V 12
-5V 13
-5V 14
+9R2V 17
+9R2V 19
+9R2VRCB 18
RCBSENS 20
DC12VIN 21
DC12VIN 22
DC12VIN 23
DC12VIN 24
From/To MOTHER BOARD CN12
+7V
-5V
+9R2V
+9R2VRCB
RCB SENS
+12V
+12V
CP
TP3 (FREQ)
IC1 SWITCHING REGULATOR
+12V
CTL
Power On/Off Control
Referance Voltage Source
CT
RT
2.5V
1.25V
Triangular wave Generator
CH1IN
Error Amp. 1
PWM Comparator
CH1OUT
CH1FB
CH1 DTC
Error Amp. 2
CH1-IN
CH2OUT
1.25V
CH2FB
CH2 DTC
CH2-IN
Error Amp. 3
CH3OUT
CH3FB
CH3 DTC
CH3-IN
VREF
SCP Comparator
2.1V
1μA
Latch
U.V.L.O
SCP
+12V
Q18, Q19, Q20
-5V REGULATOR
-5V
Q11, Q12, Q13
+9R2V REGULATOR
Q14, Q15, Q16, Q17, IC3(b)
+9R2V REGULATOR
+9R2V
+9R2VRCB
RCBSENS
Q6, Q7, Q8
+7V REGULATOR
Q9, Q10, IC3(c)
+7V REGULATOR
+7V
VR2 (FREQ)
IC2 SWITCHING REGULATOR
VR1 (+5.2V)
Q3, Q4, Q5
-5R2V REGULATOR
-9V
Q28, Q29, Q39
-5R2VD
-9R2V REGULATOR
+21V
+7V REGULATOR
Q21, Q22, Q23, Q24, Q25
Q26, Q27, IC3(a)
+5R2VA REGULATOR
+5R2VA
Q30, Q31, IC3(d)
+5R2VD REGULATOR
+5R2VD

BLOCK DIAGRAM OF MODULATOR BOARD (WV-PS550)


MODULATOR BOARD
CN1
+8.8V IN 1
+8.8V IN 2
+8.8V IN 3
+8.8V IN 4
+5.2V IN 5
+5.2V IN 6
+5.2V IN 7
+5.2V IN 8
VIDEO (ENC) IN 9
GROUND 10
GROUND 11
TXD IN 12
NOT USED 13
NOT USED 14
-5V IN 15
-5V IN 16
-5V IN 17
-5V IN 18
MPX INCOM IN 19
MPX/RCU IN 20
NOT USED 21
GROUND 22
GROUND 23
GROUND 24
GROUND 25
GROUND 26
GROUND 27
NOT USED 28
GROUND 29
GROUND 30
SAMPLE PULSE OUT 31
GROUND 32
GROUND 33
D/CANCEL OUT 34
GROUND 35
GROUND 36
GROUND 37
GROUND 38
GROUND 39
GROUND 40
NOT USED 41
MPX IND2 IN 42
GROUND 43
GROUND 44
MPX OUT 45
GROUND 46
GROUND 47
GROUND 48
GROUND 49
GROUND 50
TO MOTHER BOARD ...CN3
+8.8V
+5.2V
+5V
Q1-3
VIDEO GAIN CONTROL
VR1 VIDEO GAIN
CF1
8MHz LPF
Q4
BUFFER
TP1 (VIDEO)
VR2 MPX GAIN
VR3 COMMAND LEVEL
Q5-13
MIX AMP
TP10 (MPX)
TP2 (MPX OUT)
IC5 (a)
+2.4V BIAS
17MHz VCO
Q16
BUFFER
IC4
IC6 (a)
COMP
IC7
IC6 (b)
AMP
X1
VCXO
IC8
IC9 (a) (b)
COUNT
L6, C36
LPF
IC2
SYNC SEP
2
5 BURST
3
IC3
TP3 (V SYNC)
Q17
+4.8V
IC10 (b)
RETRIGGERABLE MONOSTABLE MULTIVIBRATOR
Q
Q̄
VR4 AGC PULSE PHASE
IC14 (a)
MONOSTABLE MULTIVIBRATOR
VR11 AGC PULSE WIDTH
IC11 (b)
TP4 (AGC PULSE)
TP8 (17MHz)
L19-21
17MHz BPF
CARRIER
IC13 (b)
MONOSTABLE MULTIVIBRATOR
VR8 DATA CANCEL
TP6 (DATA CANCEL)
Q20
BUFFER
CF2, CF3
LPF
Q21
AMP
SIGNAL
IC15
MODULATION AMP
Q22
BUFFER
L13-18
BPF
Q23
BUFFER
VR5 COMMAND CARRIER-1
VR6 COMMAND CARRIER-2
IC10 (a)
RETRIGGERABLE MONOSTABLE MULTIVIBRATOR
TP5 (AGC CANCEL)
IC11 (a)
VR7 AGC CANCEL
VOLTAGE REGULATOR
IC1 (a), Q14, Q15
Q24, Q25
+8.8V
REG
+8.4V
IC1 (b), Q18, Q19
Q26, Q27
+5.2V
REG
+4.8V
Q28
Q30
-5V
-5V
Q29
MPX/RCU
IC13 (a)
MONOSTABLE MULTIVIBRATOR
VR9 AGC GATE PHASE
IC14 (b)
MONOSTABLE MULTIVIBRATOR
VR10 AGC PULSE
TP7 (AGC GATE)

BLOCK DIAGRAM OF DEMODURATOR BOARD (WV-PS550)

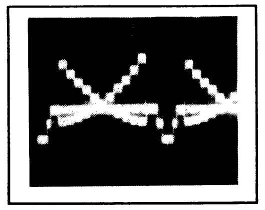
DEMODULATOR BOARD


GEN-LOCK
MPX
Q1 BUFFER
CF3, CF4 BPF
TP1 (MPX)
IC1 AGC AMP
FET Q2
TP2 (G/L AGC)
Q3-8 AMP
L7, L8
CT1 G/L DOM
Q9 BUFFER
CF5, CF6 BPF
Q10-15 AMP
IC2 (a), Q16, Q17 INTEGRATOR
VR1 GL LEVEL
TP3 (G/L AGC DC)
IC2 (b) LEVEL COMP
G/L AGC DC
IC14 SEL
G/L OUT
A
B
C
IC16
CF1
Q18 BUFFER
VR3 G/L BURST LEVEL
Q20, Q21 MIX AMP
TP4 (G/L)
IC4 Video Signal Interface
2
3
9
IC3 SYNC SEP
2
5
1
BURST
IC15
C SYNC
Q19 BUFFER
VR2 G/L SYNC LEVEL
CN1
+8.8V IN 1
+8.8V IN 2
+8.8V IN 3
+8.8V IN 4
+5.2V IN 5
+5.2V IN 6
+5.2V IN 7
+5.2V IN 8
GROUND 9
GROUND 10
GROUND 11
NOT USED 12
RXD IN 13
NOT USED 14
-5V IN 15
-5V IN 16
-5V IN 17
-5V IN 18
NOT USED 19
MPX/RCU IN 20
NOT USED 21
G/L OUT 22
GROUND 23
GROUND 24
NOT USED 25
GROUND 26
GROUND 27
NOT USED 28
GROUND 29
GROUND 30
SAMPLE PULSE IN 31
GROUND 32
GROUND 33
D/CANCEL IN 34
GROUND 35
GROUND 36
GROUND 37
RXD OUT 38
GROUND 39
GROUND 40
MPX IND1 OUT 41
MPX IND2 OUT 42
GROUND 43
GROUND 44
MPX IN 45
GROUND 46
GROUND 47
GROUND 48
GROUND 49
GROUND 50
+8.8V
+5.2V
-5V
TO MOTHER BOARD ...CN4
COMMAND EXTRACTION
MPX
CF2
Q23 BUFFER
CF7 BPF
IC5, Q24 AGC AMP
FET Q25
TP5 (COMMAND AGC)
Q26-31 AMP
L18, L19
CT2 COMMAND DOM
Q32 BUFFER
CF8 BPF
Q33-38 AMP
IC6 (a) AMP
Q39
SMP
IC7 (a) INTEGRATOR
VR4 COMMAND AGC
TP6 (COMMAND AGC DC)
COMMAND AGC DC
RXD IN
IC12 SEL
RCU
MPX
A
B
C
RXD OUT
IC8 (a) (b), IC9 (a) WAVEFORM SHAPE
TP7 (COMMAND)
IC10
D/CANCEL
IC9 (b) (c) BUFFER
TP8 (COMMAND PULSE)
RETRIGGERABLE MONOSTABLE MULTIVIBRATOR
Q
Q̄
IC9 (e)
MPX IND2
IC9 (d)
TP9 (RCU/MPX)
MPX IND1
VOLTAGE REGULATOR
IC13 (a), Q42, Q43
+5.2V
REG
Q47, Q48
+4.8V
IC13 (b), Q40, Q41
+8.8V
REG
Q45, Q46
+8.4V
Q44
MPX/RCU

SCHEMATIC DIAGRAM OF PREAMP/ENCODE

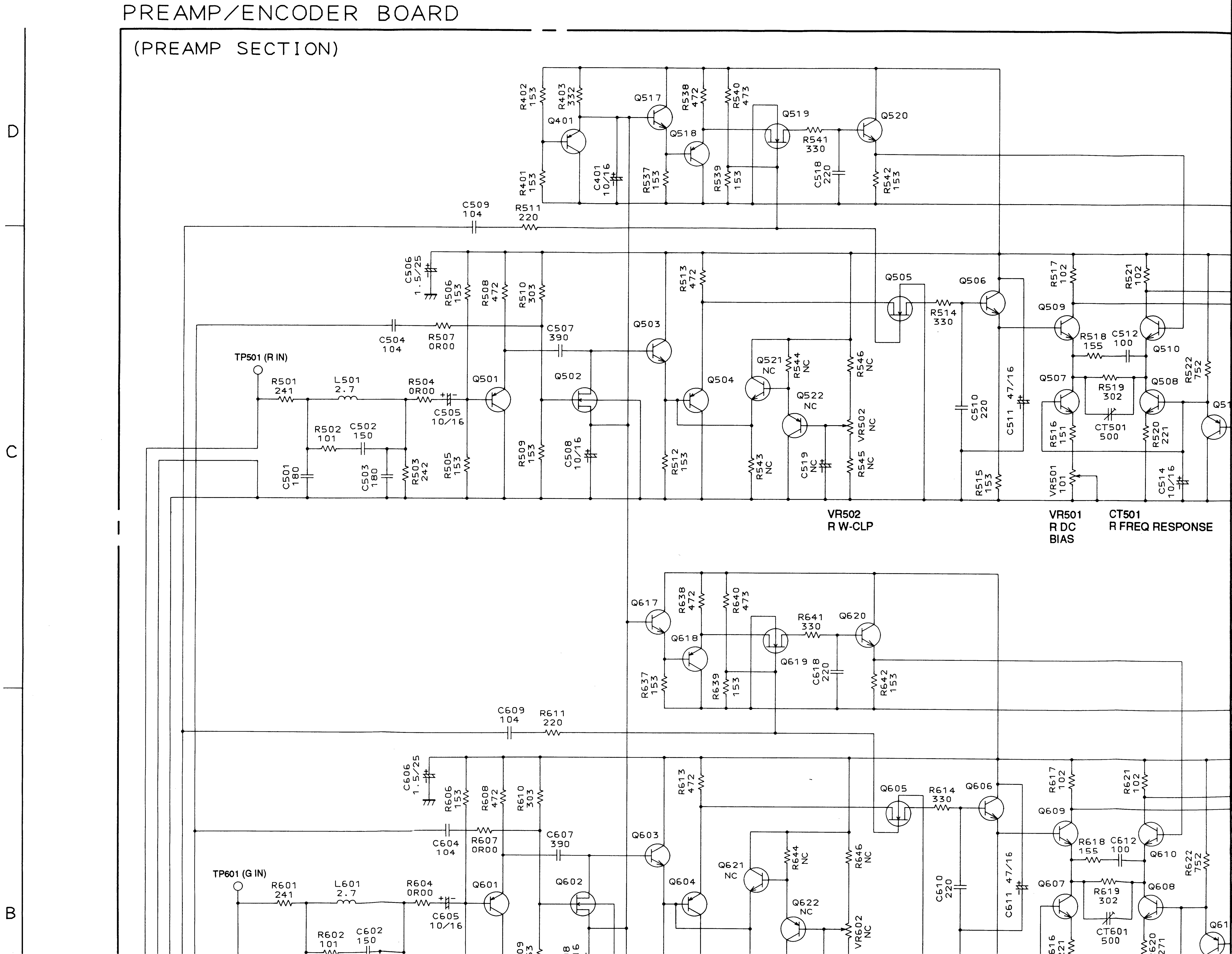
PREAMP SECTION

1. 10µsec/DIV 0.1V/DIV

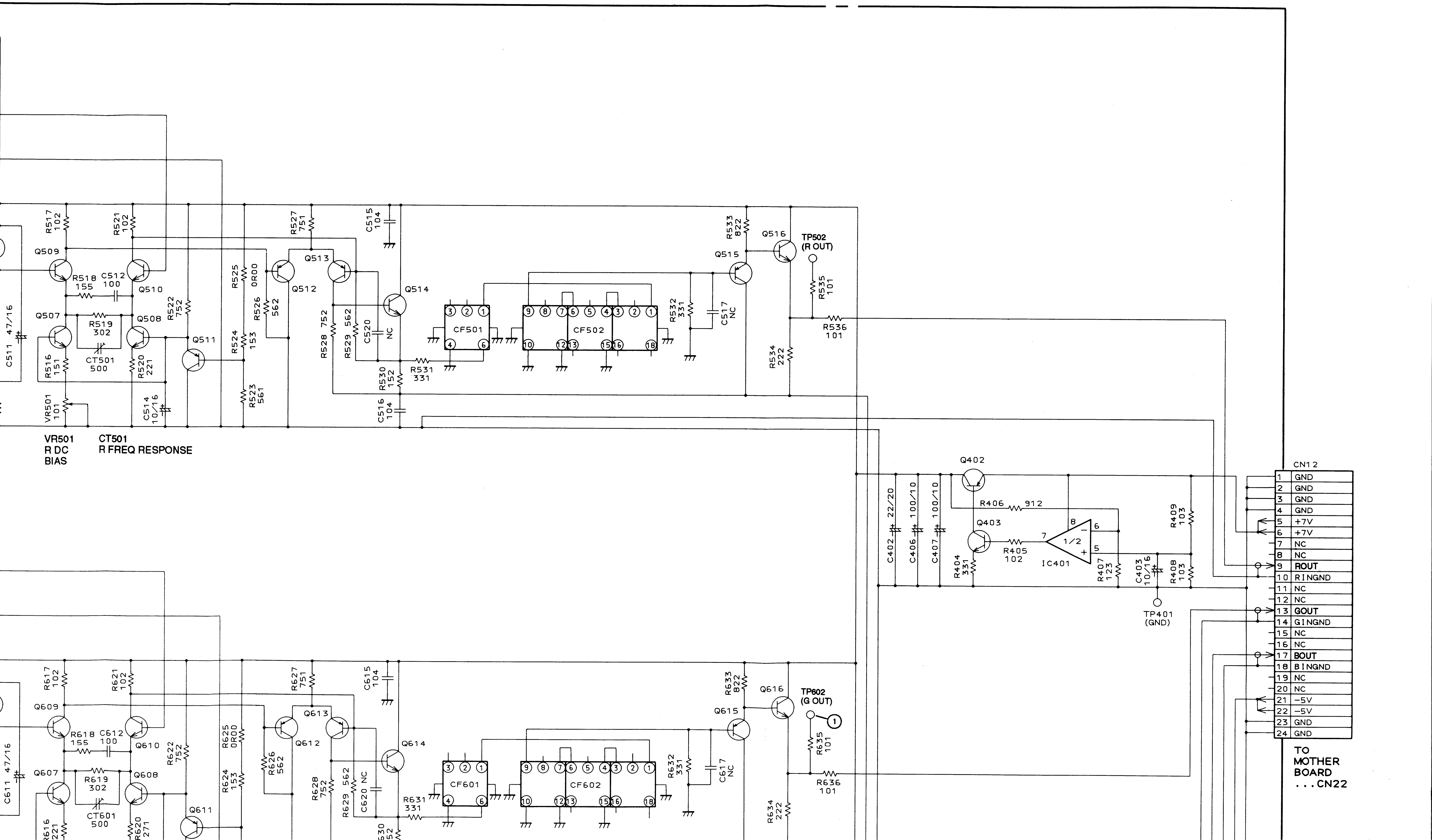


< Index>
PREAMP SECTION

IC401	A5, C5	Q80	D3
Q1	E2	Q81	B2
Q3	E3	Q82	C2
Q4	E4	Q83	B3
Q5	E4	Q84	B3
Q6	E4	Q85	D2
Q7	E4	Q86	D3
Q8	D2	Q87	C2
Q9	D2	Q401	D2
Q11	D3	Q402	C5
Q12	D3	Q403	C5
Q13	D3	Q404	B5
Q14	D4	Q405	A5
Q15	D4	Q501	C2
Q16	D4	Q502	C2
Q17	D4	Q503	C2
Q18	D4	Q504	C2
Q19	D4	Q505	C2
Q20	D4	Q506	C3
Q21	D4	Q507	C3
Q22	C2	Q508	C3
Q23	C2	Q509	C3
Q24	C3	Q510	C3
Q25	C3	Q511	C3
Q26	C5	Q512	C3
Q27	C5	Q513	C3
Q28	C5	Q514	C4
Q29	B2	Q515	C4
Q30	B2	Q516	C4
Q32	B3	Q517	D2
Q33	C3	Q518	D2
Q34	B3	Q519	D2
Q35	C3	Q520	D2
Q36	C4	Q601	B2
Q42	B3	Q602	B2
Q44	B3	Q603	B2
Q46	B3	Q604	B2
Q47	A2	Q605	B2
Q48	A2	Q606	B3
Q49	A2	Q607	B3
Q50	A2	Q608	B3
Q51	A2	Q609	B3
Q52	A2	Q610	B3
Q53	A3	Q611	B3
Q54	A3	Q612	B3
Q55	A3	Q613	B3
Q56	A3	Q614	B4
Q57	A3	Q615	B4
Q58	A3	Q616	B4
Q59	A4	Q617	C2
Q60	A4	Q618	C2
Q61	A4	Q619	C2
Q62	A4	Q620	C2
Q63	A4	Q701	A2
Q64	A4	Q702	A2
Q65	A5	Q703	A2
Q66	A5	Q704	A2
Q67	A5	Q705	A2
Q68	A5	Q706	A3
Q69	A5	Q707	A3
Q70	A5	Q708	A3
Q71	A6	Q709	A3
Q72	A6	Q710	A3
Q73	A6	Q711	A3
Q74	A6	Q712	A3
Q75	A6	Q713	A3
Q76	A6	Q714	A4
Q77	C5	Q715	A4
Q78	D2	Q716	A4
Q79	D3	Q717	B2
		Q718	A2


PREAMP/ENCODER BOARD
(PREAMP SECTION)
D
C
B
R402 153
R403 332
Q401
Q517
R538 472
R540 473
Q519
Q520
Q518
R541 330
R401 153
C401 10/16
R537 153
R539 153
C518 220
R542 153
C509 104
R511 220
C506 1.5/25
R506 153
R508 472
R510 303
R513 472
Q505
Q506
R514 330
R517 102
R521 102
Q509
R518 155
C512 100
Q510
Q503
C504 104
R507 0R00
C507 390
Q521 NC
R544 NC
R546 NC
Q522 NC
TP501 (R IN)
R501 241
L501 2.7
R504 0R00
C505 10/16
Q501
Q502
Q504
Q507
R519 302
CT501 500
Q508
R522 752
R502 101
C502 150
VR502 NC
C510 220
C511 47/16
R516 151
R520 221
C501 180
C503 180
R503 242
R505 153
R509 153
C508 10/16
R512 153
R543 NC
C519 NC
R545 NC
R515 153
VR501 101
C514 10/16
VR502
R W-CLP
VR501
R DC
BIAS
CT501
R FREQ RESPONSE
Q617
R638 472
R640 473
R641 330
Q620
Q618
Q619
C618 220
R642 153
R637 153
R639 153
C609 104
R611 220
C606 1.5/25
R606 153
R608 472
R610 303
R613 472
Q605
R614 330
Q606
R617 102
R621 102
Q609
R618 155
C612 100
Q610
C604 104
R607 0R00
C607 390
Q603
Q621 NC
R644 NC
R646 NC
R622 752
TP601 (G IN)
R601 241
L601 2.7
R604 0R00
C605 10/16
Q601
Q602
Q604
Q622 NC
VR602 NC
C610 220
C611 47/16
Q607
R619 302
Q608
CT601 500
R602 101
C602 150

F PREAMP/ENCODER BOARD (PRE AMP SECTION) (WV-E550E)


R517 102
R521 102
Q509
Q510
R518 155
C512 100
Q507
Q508
R519 302
CT501 500
R516 151
R520 221
C511 47/16
R522 752
Q511
C514 10/16
VR501 101
VR501
R DC
BIAS
CT501
R FREQ RESPONSE
R525 0R00
R526 562
R524 153
R523 561
R527 751
Q512
Q513
C515 104
Q514
R528 752
R529 562
C520 NC
R530 152
R531 331
C516 104
CF501
CF502
R532 331
C517 NC
R533 822
Q515
Q516
TP502
(R OUT)
R535 101
R536 101
R534 222
Q402
Q403
R406 912
R405 102
R404 331
IC401
1/2
C402 22/20
C406 100/10
C407 100/10
R407 123
C403 10/16
R409 103
R408 103
TP401
(GND)
CN12
1 GND
2 GND
3 GND
4 GND
5 +7V
6 +7V
7 NC
8 NC
9 ROUT
10 RINGND
11 NC
12 NC
13 GOUT
14 GINGND
15 NC
16 NC
17 BOUT
18 BINGND
19 NC
20 NC
21 -5V
22 -5V
23 GND
24 GND
TO
MOTHER
BOARD
...CN22
R617 102
R621 102
Q609
Q610
R618 155
C612 100
Q607
Q608
R619 302
CT601 500
R616 221
R620 271
C611 47/16
R622 752
Q611
R625 0R00
R626 562
R624 153
R627 751
Q612
Q613
C615 104
Q614
R628 752
R629 562
C620 NC
R631 331
CF601
CF602
R632 331
C617 NC
R633 822
Q615
Q616
TP602
(G OUT)
1
R635 101
R636 101
R634 222

Q63	A4	Q701	A2
Q64	A4	Q702	A2
Q65	A5	Q703	A2
Q66	A5	Q704	A2
Q67	A5	Q705	A2
Q68	A5	Q706	A3
Q69	A5	Q707	A3
Q70	A5	Q708	A3
Q71	A6	Q709	A3
Q72	A6	Q710	A3
Q73	A6	Q711	A3
Q74	A6	Q712	A3
Q75	A6	Q713	A3
Q76	A6	Q714	A4
Q77	C5	Q715	A4
Q78	D2	Q716	A4
Q79	D3	Q717	B2
		Q718	A2
		Q719	B2
		Q720	B2
		D1	D4
		D3	A2
		D5	A4
		D8	C5
		D9	B5

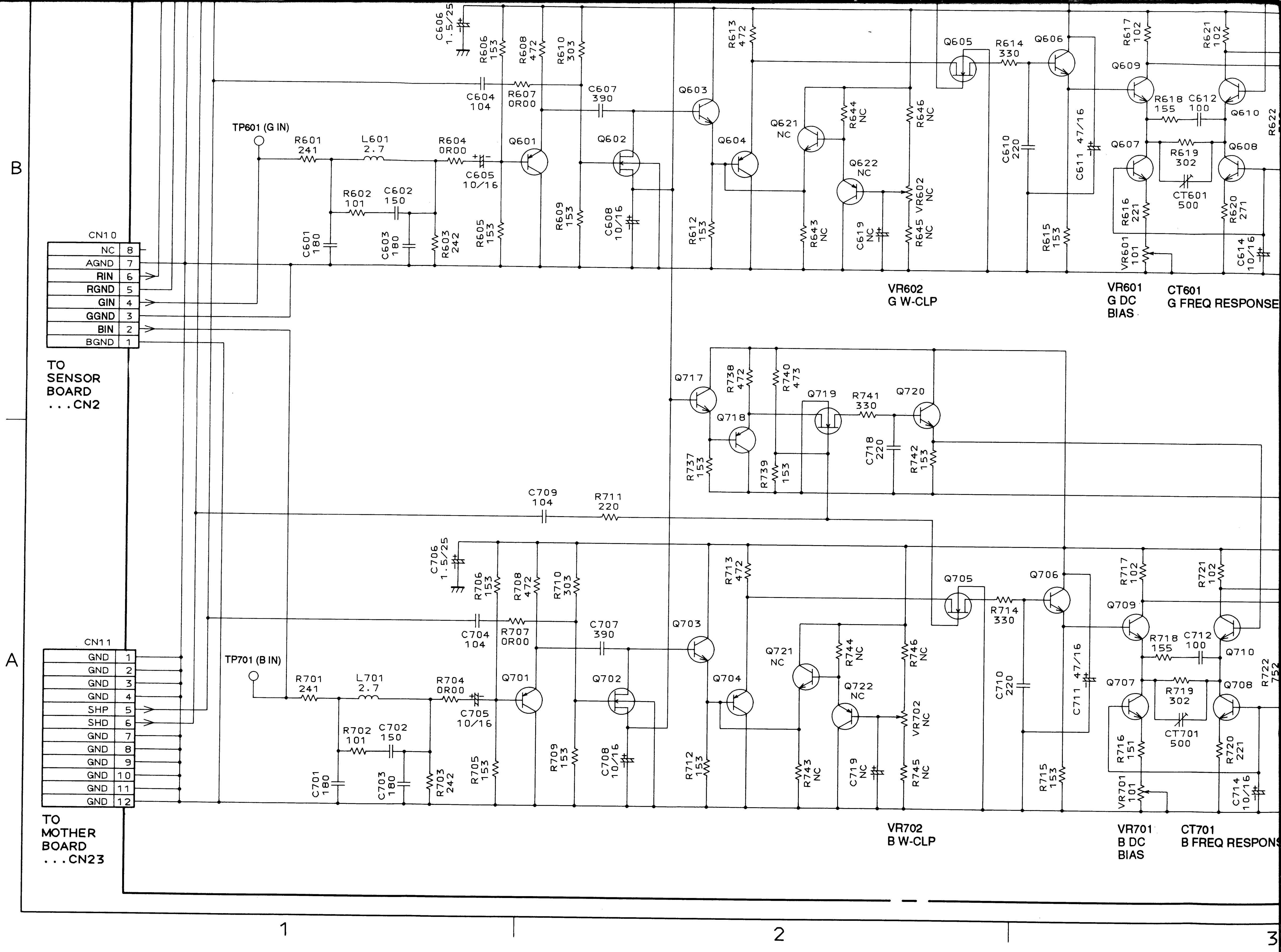
PREAMP SECTION

	B	C	E
Q401	3.1	0	1.6
402	6.3	6.2	7.0
403	0.7	6.3	0.1
404	-4.5	-4.5	-5.2
405	-0.6	-4.5	0
501	3.1	0	3.8
504	3.0	0	3.7
506	3.6	6.2	2.9
507	0.9	2.1	0.3
508	0.9	2.2	0.3
509	2.9	4.1	2.1
510	2.9	4.1	2.2
511	0.2	0	0.9
512	4.1	0	4.8
513	4.1	0.8	4.8
514	0.8	6.2	0
515	0	-4.6	0.7
516	0.7	6.2	0
517	3.8	1.1	1.1
518	3.0	0	3.8
520	3.7	6.2	3.0
521	3.2	6.2	1.5
522	2.5	1.5	3.2
601	3.2	0	3.8
603	3.8	6.2	3.0
604	3.0	0	3.7
606	3.6	6.2	2.9
607	0.9	2.1	0.3
608	0.9	2.2	0.3
609	2.8	4.3	2.1
610	3.0	4.3	2.2

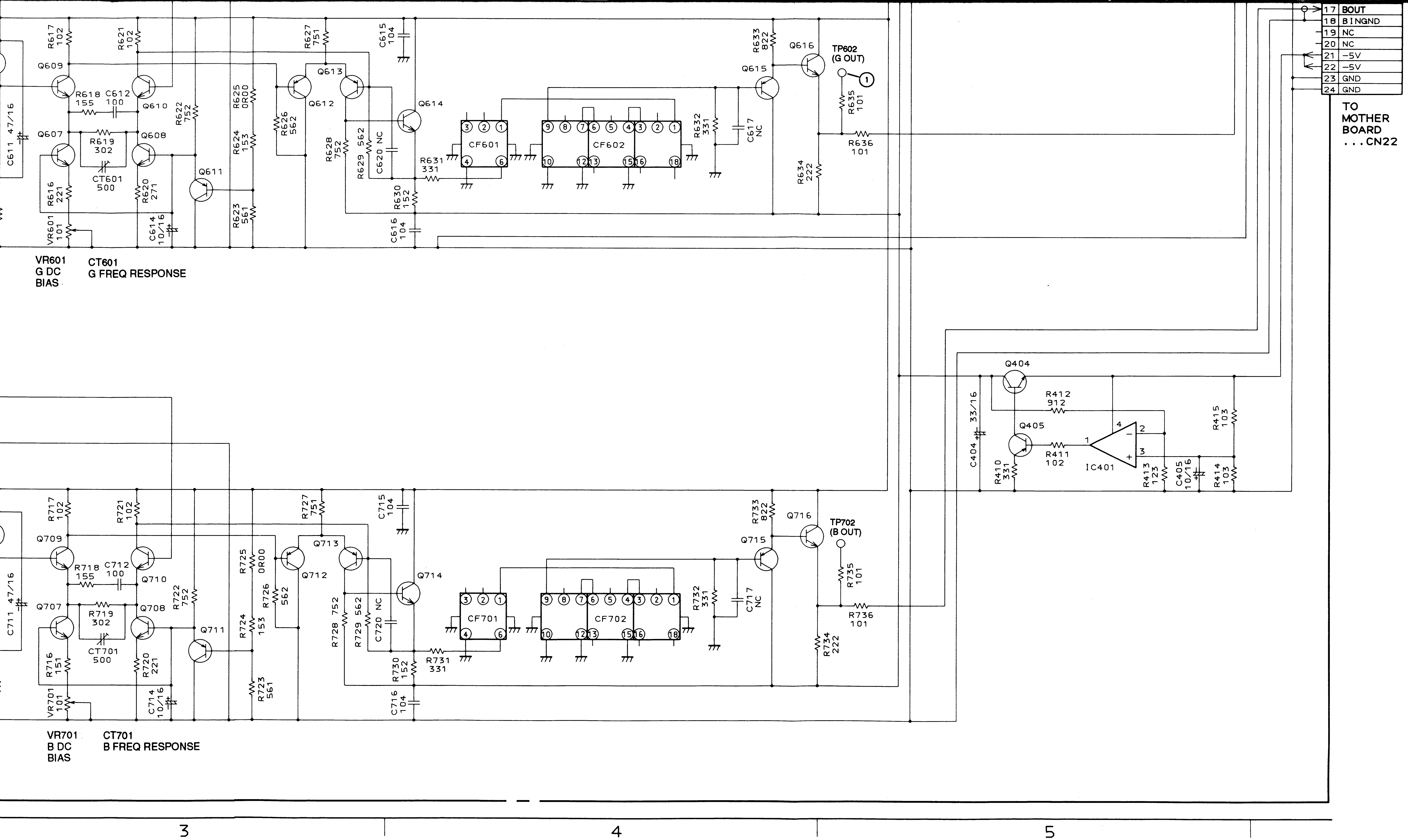
	B	C	E
Q611	0.2	0	0.9
612	4.3	0	5.0
613	4.2	1.0	5.0
614	1.1	6.2	0.3
615	0.1	-4.6	0.8
616	0.8	6.2	0.1
617	3.8	0.2	3.1
618	3.1	0	3.8
620	3.8	6.2	3.0
621	2.9	1.6	3.0
622	2.2	0	2.9
701	3.1	0	3.8
703	3.8	6.2	3.0
704	3.0	0	3.6
706	3.6	6.2	2.9
707	0.9	2.1	0.3
708	0.9	2.2	0.3
709	2.9	4.1	2.1
710	3.0	4.1	2.2
711	0.2	0	0.9
712	4.1	0	4.8
713	4.1	1.0	4.8
714	1.1	6.2	0.3
715	0.1	-4.5	0.8
716	0.8	6.2	0
717	2.0	6.2	3.1
718	3.1	0	3.8
720	3.8	6.2	3.0
721	3.4	6.1	2.9
722	2.7	0	3.4

	IC401
Pin 1	-0.6
2	-2.6
3	-2.6
4	-5.1
5	3.5
6	3.5
7	0.7
8	7.0

	Q502	Q505	Q519	Q602	Q605	Q619	Q702	Q705	Q719
Pin 1	0	0	0	0	0	0	0	0	0
2	2.0	1.5	1.5	2.1	1.5	1.5	2.0	1.5	1.5
3	3.8	3.6	3.8	3.8	3.6	3.9	3.8	3.6	3.8
4	3.8	3.6	3.8	3.8	3.6	3.9	3.8	3.6	3.8



B
A
1
2
3
CN10
NC 8
AGND 7
RIN 6
RGND 5
GIN 4
GGND 3
BIN 2
BGND 1
TO SENSOR BOARD ...CN2
CN11
GND 1
GND 2
GND 3
GND 4
SHP 5
SHD 6
GND 7
GND 8
GND 9
GND 10
GND 11
GND 12
TO MOTHER BOARD ...CN23
TP601 (G IN)
TP701 (B IN)
R601 241
L601 2.7
R602 101
C602 150
C601 180
C603 180
R603 242
R604 0R00
C605 10/16
R605 153
C604 104
R607 0R00
C606 1.5/25
R606 153
R608 472
R610 303
C607 390
R609 153
C608 10/16
Q601
Q602
Q603
Q604
R612 153
R613 472
Q621 NC
R644 NC
R643 NC
Q622 NC
C619 NC
R646 NC
VR602 NC
R645 NC
Q605
R614 330
Q606
C610 220
C611 47/16
R615 153
R617 102
R621 102
Q609
R618 155
C612 100
Q610
Q607
R619 302
Q608
CT601 500
R616 221
R620 271
VR601 101
C614 10/16
R622
VR602 G W-CLP
VR601 G DC BIAS
CT601 G FREQ RESPONSE
Q717
R738 472
R740 473
Q719
R741 330
Q720
Q718
C718 220
R742 153
R737 153
R739 153
C709 104
R711 220
R701 241
L701 2.7
R702 101
C702 150
C701 180
C703 180
R703 242
R704 0R00
C705 10/16
R705 153
C704 104
R707 0R00
C706 1.5/25
R706 153
R708 472
R710 303
C707 390
R709 153
C708 10/16
Q701
Q702
Q703
Q704
R712 153
R713 472
Q721 NC
R744 NC
R743 NC
Q722 NC
C719 NC
R746 NC
VR702 NC
R745 NC
Q705
R714 330
Q706
C710 220
C711 47/16
R715 153
R717 102
R721 102
Q709
R718 155
C712 100
Q710
R722 752
Q707
R719 302
Q708
CT701 500
R716 151
R720 221
VR701 101
C714 10/16
VR702 B W-CLP
VR701 B DC BIAS
CT701 B FREQ RESPONS


R617 102
R621 102
R627 751
C615 104
R633 822
Q616
TP602 (G OUT)
①
Q609
Q613
Q615
Q612
Q614
R618 155
C612 100
Q610
R622 752
R625 0R00
R626 562
CF601
CF602
R632 331
C617 NC
R635 101
R636 101
C611 47/16
Q607
R619 302
Q608
R624 153
R628 752
R629 562
C620 NC
R631 331
CT601 500
Q611
R634 222
R616 221
R620 271
R623 561
R630 152
VR601 101
C614 10/16
C616 104
VR601
G DC
BIAS
CT601
G FREQ RESPONSE
17 BOUT
18 BINGND
19 NC
20 NC
21 −5V
22 −5V
23 GND
24 GND
TO
MOTHER
BOARD
. . . CN22
Q404
R412 912
C404 33/16
Q405
R411 102
IC401
R410 331
R413 123
C405 10/16
R415 103
R414 103
R717 102
R721 102
R727 751
C715 104
R733 822
Q716
TP702 (B OUT)
Q709
Q713
Q715
R725 0R00
Q712
Q714
R718 155
C712 100
Q710
R722 752
R726 562
CF701
CF702
R732 331
C717 NC
R735 101
R736 101
C711 47/16
Q707
R719 302
Q708
Q711
R724 153
R728 752
R729 562
C720 NC
CT701 500
R716 151
R720 221
R723 561
R730 152
R731 331
R734 222
VR701 101
C714 10/16
C716 104
VR701
B DC
BIAS
CT701
B FREQ RESPONSE
3
4
5

Note: The value indicated in the schematic diagram should be read as follows:

□□□
- Multiplier (0 - 5)
- 2nd. Significant Digit (0 - 9)
- 1st. Significant Digit (1 - 9)

<Example>

For Resistor:

330 → 33×10^0 = 33 Ω
561 → 56×10^1 = 560 Ω
123 → 12×10^3 = 12k Ω
0R00 = 0 Ω

For Capacitor:

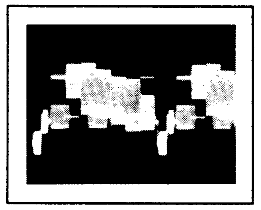
820 → 82×10^0 = 82 pF
102 → 10×10^2 = 1000 pF = 0.001 μF
104 → 10×10^4 = 100000 pF = 0.1 μF

The suffix attached to capacitance indicates a type of capacitor.

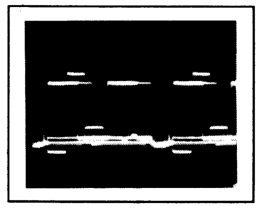
SCHEMATIC DIAGRAM OF PREAMP/ENCODER

ENCODER SECTION

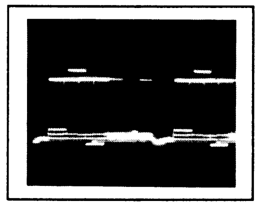
1. 10μsec/DIV 0.5V/DIV



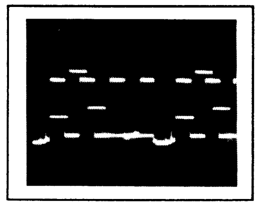
2. 10μsec/DIV 0.2V/DIV



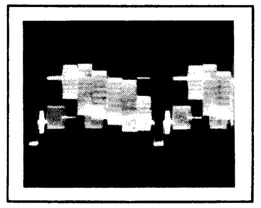
3. 10μsec/DIV 0.2V/DIV



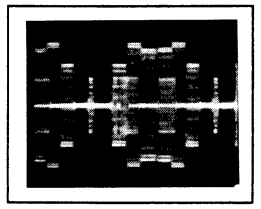
4. 10μsec/DIV 0.2V/DIV



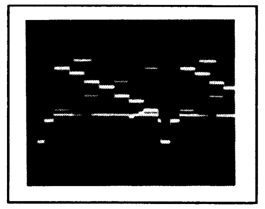
5. 10μsec/DIV 0.5V/DIV



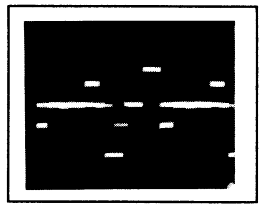
6. 10μsec/DIV 0.2V/DIV



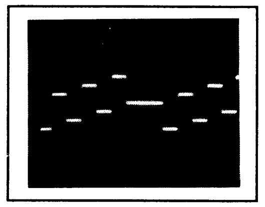
7. 10μsec/DIV 0.5V/DIV



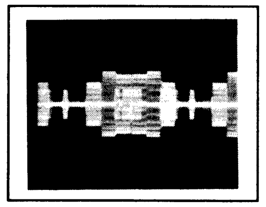
8. 10μsec/DIV 0.5V/DIV



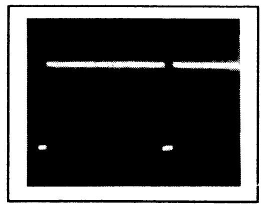
9. 10μsec/DIV 0.5V/DIV



10. 10μsec/DIV 0.2V/DIV

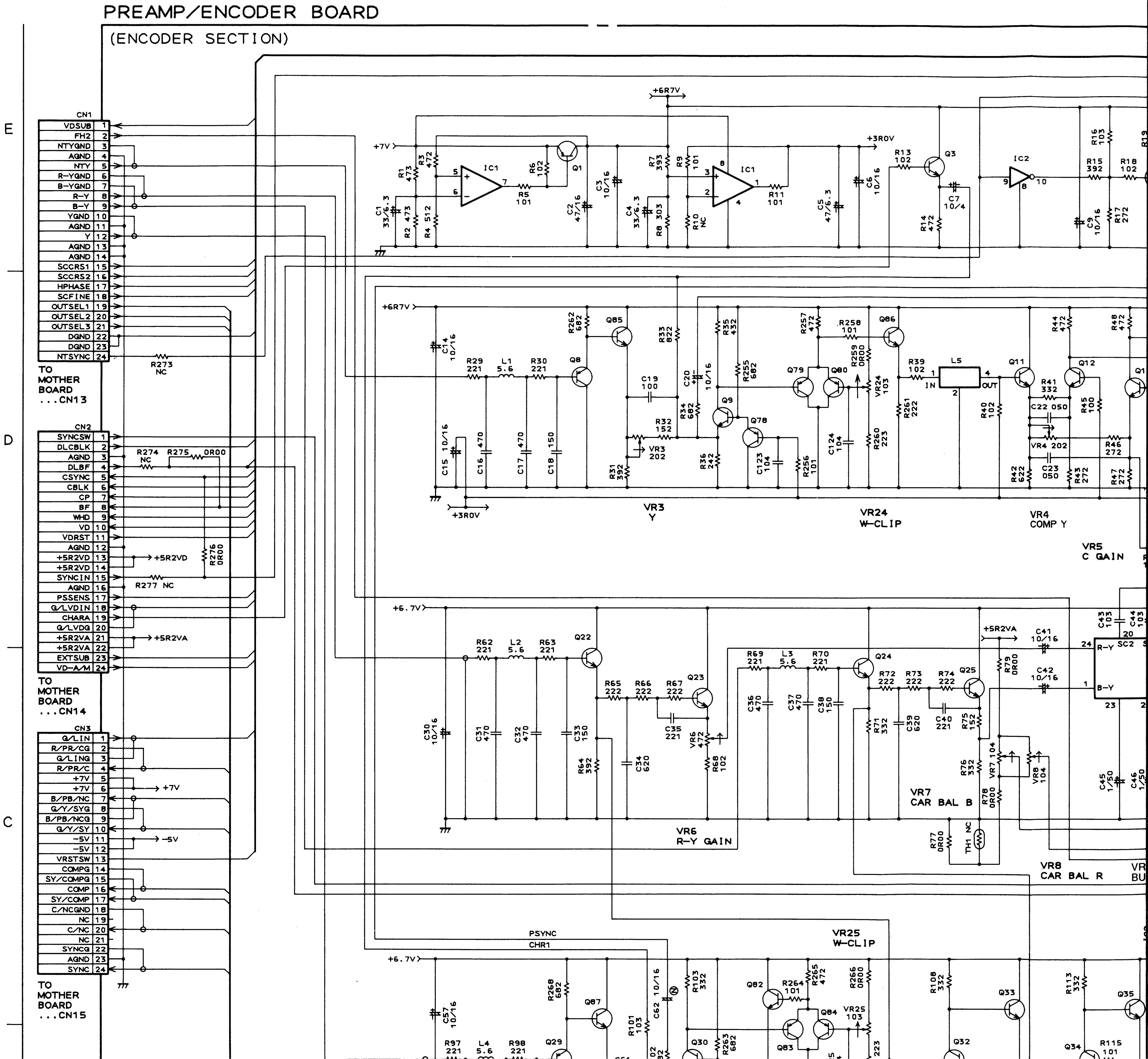


11. 10μsec/DIV 0.2V/DIV

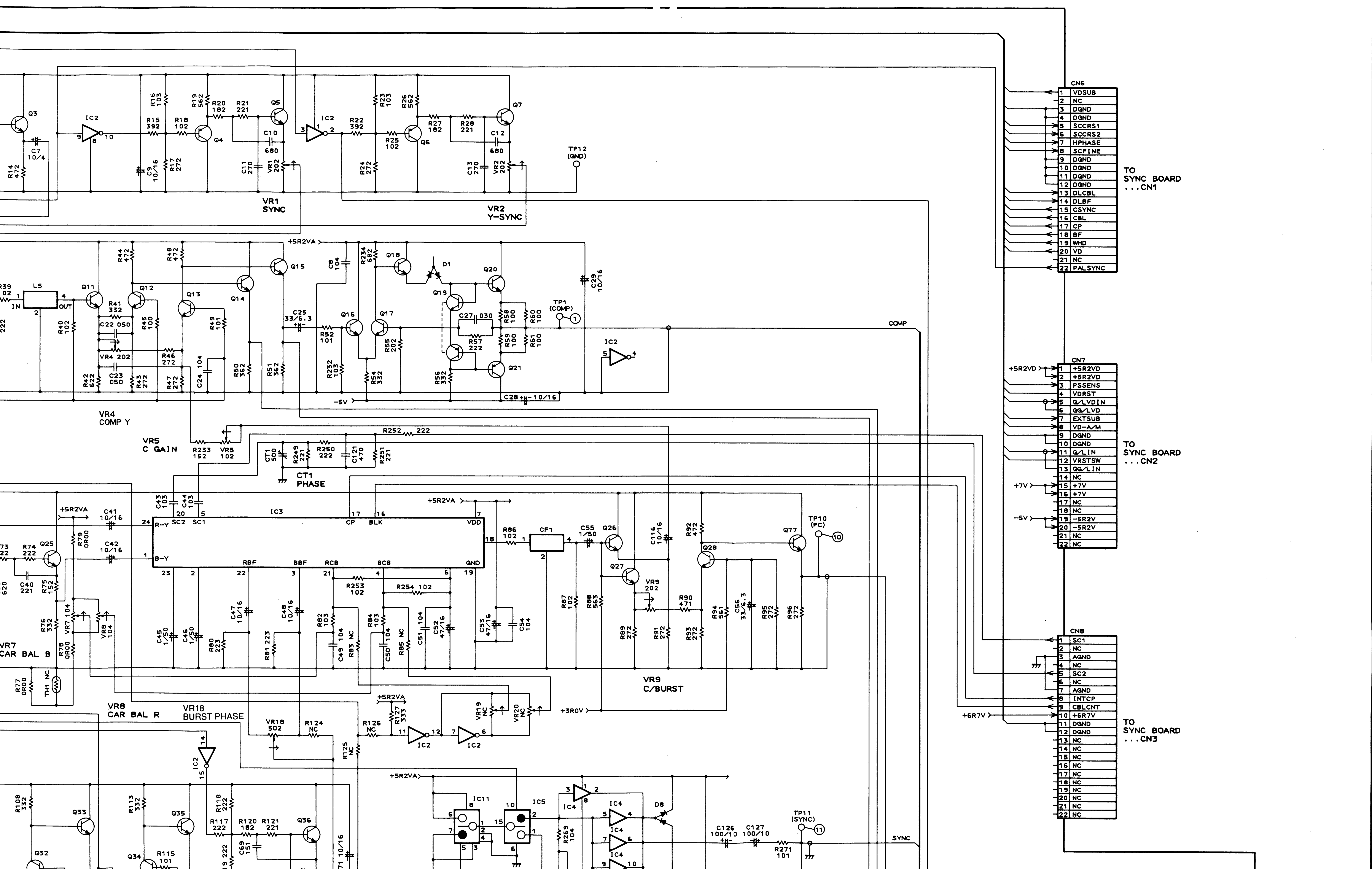


< Index>
ENCODER SECTION

IC1	E2	Q52	A2
IC2	C4, D5, E3, E4	Q53	A3
IC3	C4	Q54	A3
IC4	B5, C5	Q55	A3
IC5	B5	Q56	A3


PREAMP/ENCODER BOARD
(ENCODER SECTION)
E
D
C
CN1
VDSUB 1
FH2 2
NTYGND 3
AGND 4
NTY 5
R-YGND 6
B-YGND 7
R-Y 8
B-Y 9
YGND 10
AGND 11
Y 12
AGND 13
AGND 14
SCCRS1 15
SCCRS2 16
HPHASE 17
SCFINE 18
OUTSEL1 19
OUTSEL2 20
OUTSEL3 21
DGND 22
DGND 23
NTSYNC 24
TO MOTHER BOARD ...CN13
R273 NC
CN2
SYNCSW 1
DLCBLK 2
AGND 3
DLBF 4
CSYNC 5
CBLK 6
CP 7
BF 8
WHD 9
VD 10
VDRST 11
AGND 12
+5R2VD 13
+5R2VD 14
SYNCIN 15
AGND 16
PSSENS 17
G/LVDIN 18
CHARA 19
G/LVDG 20
+5R2VA 21
+5R2VA 22
EXTSUB 23
VD-A/M 24
TO MOTHER BOARD ...CN14
R274 NC
R275 0R00
R276 0R00
R277 NC
+5R2VD
+5R2VA
CN3
G/LIN 1
R/PR/CG 2
G/LING 3
R/PR/C 4
+7V 5
+7V 6
B/PB/NC 7
G/Y/SYG 8
B/PB/NCG 9
G/Y/SY 10
-5V 11
-5V 12
VRSTSW 13
COMPG 14
SY/COMPG 15
COMP 16
SY/COMP 17
C/NCGND 18
NC 19
C/NC 20
NC 21
SYNCG 22
AGND 23
SYNC 24
TO MOTHER BOARD ...CN15
+7V
-5V
+6R7V
+7V
+3R0V
IC1
IC2
Q1
Q3
R1 473
R2 473
R3 472
R4 512
C1 33/6.3
R5 101
R6 102
C2 47/16
C3 10/16
C4 33/6.3
R7 393
R8 303
R9 101
R10 NC
R11 101
C5 47/6.3
C6 10/16
R13 102
R14 472
C7 10/4
R15 392
R16 103
R17 272
R18 102
C9 10/16
+6R7V
C14 10/16
C15 10/16
R29 221
L1 5.6
R30 221
C16 470
C17 470
C18 150
Q8
Q85
R262 682
R31 392
R32 152
VR3 202
C19 100
R33 822
C20 10/16
R34 682
Q9
Q78
R35 432
R36 242
C123 104
R255 682
R256 101
R257 472
R258 101
Q79
Q80
Q86
R259 0R00
VR24 103
C124 104
R260 223
R261 222
R39 102
L5
IN
OUT
R40 102
Q11
Q12
R41 332
C22 050
VR4 202
C23 050
R42 622
R43 272
R44 472
R45 100
R46 272
R47 272
R48 472
+3R0V
VR3 Y
VR24 W-CLIP
VR4 COMP Y
VR5 C GAIN
+6.7V
R62 221
L2 5.6
R63 221
Q22
C30 10/16
C31 470
C32 470
C33 150
R64 392
C34 620
R65 222
R66 222
R67 222
Q23
C35 221
VR6 472
R68 102
R69 221
L3 5.6
R70 221
C36 470
C37 470
C38 150
Q24
R71 332
C39 620
R72 222
R73 222
R74 222
Q25
C40 221
R75 152
R76 332
VR7 104
VR8 104
R78 0R00
R77 0R00
TH1 NC
R79 0R00
+5R2VA
C41 10/16
C42 10/16
R-Y
B-Y
SC2
C43 103
C44 103
C45 1/50
C46 1/50
VR6 R-Y GAIN
VR7 CAR BAL B
VR8 CAR BAL R
PSYNC
CHR1
VR25 W-CLIP
+6.7V
C57 10/16
R97 221
L4 5.6
R98 221
Q29
R268 682
Q87
C62 10/16
R101 103
R103 332
Q30
R263 682
Q82
R264 101
R265 472
Q83
Q84
VR25 103
R266 0R00
R108 332
Q32
Q33
R113 332
Q34
Q35
R115 101

PREAMP/ENCODER BOARD (ENCODER SECTION) (WV-E550E)


VR1
SYNC
VR2
Y-SYNC
TP12
(GND)
VR4
COMP Y
VR5
C GAIN
CT1
PHASE
TP1
(COMP)
COMP
+5R2VA
-5V
IC3
R-Y
B-Y
SC2
SC1
CP
BLK
VDD
GND
RBF
BBF
RCB
BCB
CF1
TP10
(PC)
VR9
C/BURST
+3R0V
VR7
CAR BAL B
VR8
CAR BAL R
VR18
BURST PHASE
IC11
IC5
IC4
D8
TP11
(SYNC)
SYNC
CN6
1 VDSUB
2 NC
3 DGND
4 DGND
5 SCCRS1
6 SCCRS2
7 HPHASE
8 SCFINE
9 DGND
10 DGND
11 DGND
12 DGND
13 DLCBL
14 DLBF
15 CSYNC
16 CBL
17 CP
18 BF
19 WHD
20 VD
21 NC
22 PALSYNC
TO SYNC BOARD ...CN1
CN7
+5R2VD
1 +5R2VD
2 +5R2VD
3 PSSENS
4 VDRST
5 G/LVDIN
6 GG/LVD
7 EXTSUB
8 VD-A/M
9 DGND
10 DGND
11 G/LIN
12 VRSTSW
13 GG/LIN
14 NC
15 +7V
16 +7V
17 NC
18 NC
19 -5R2V
20 -5R2V
21 NC
22 NC
+7V
-5V
TO SYNC BOARD ...CN2
CN8
1 SC1
2 NC
3 AGND
4 NC
5 SC2
6 NC
7 AGND
8 INTCP
9 CBLCNT
10 +6R7V
11 DGND
12 DGND
13 NC
14 NC
15 NC
16 NC
17 NC
18 NC
19 NC
20 NC
21 NC
22 NC
+6R7V
TO SYNC BOARD ...CN3

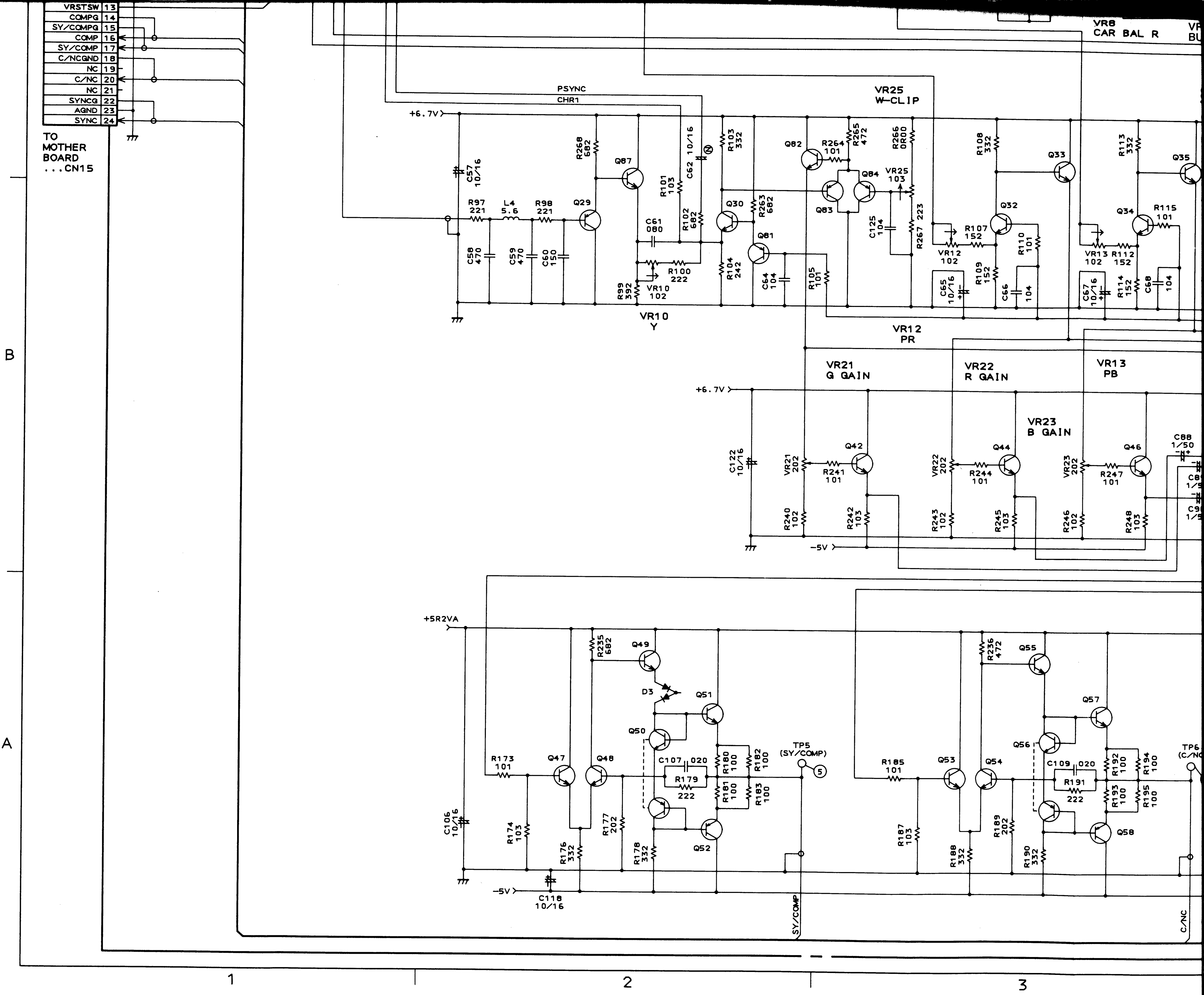
< Index>
ENCODER SECTION

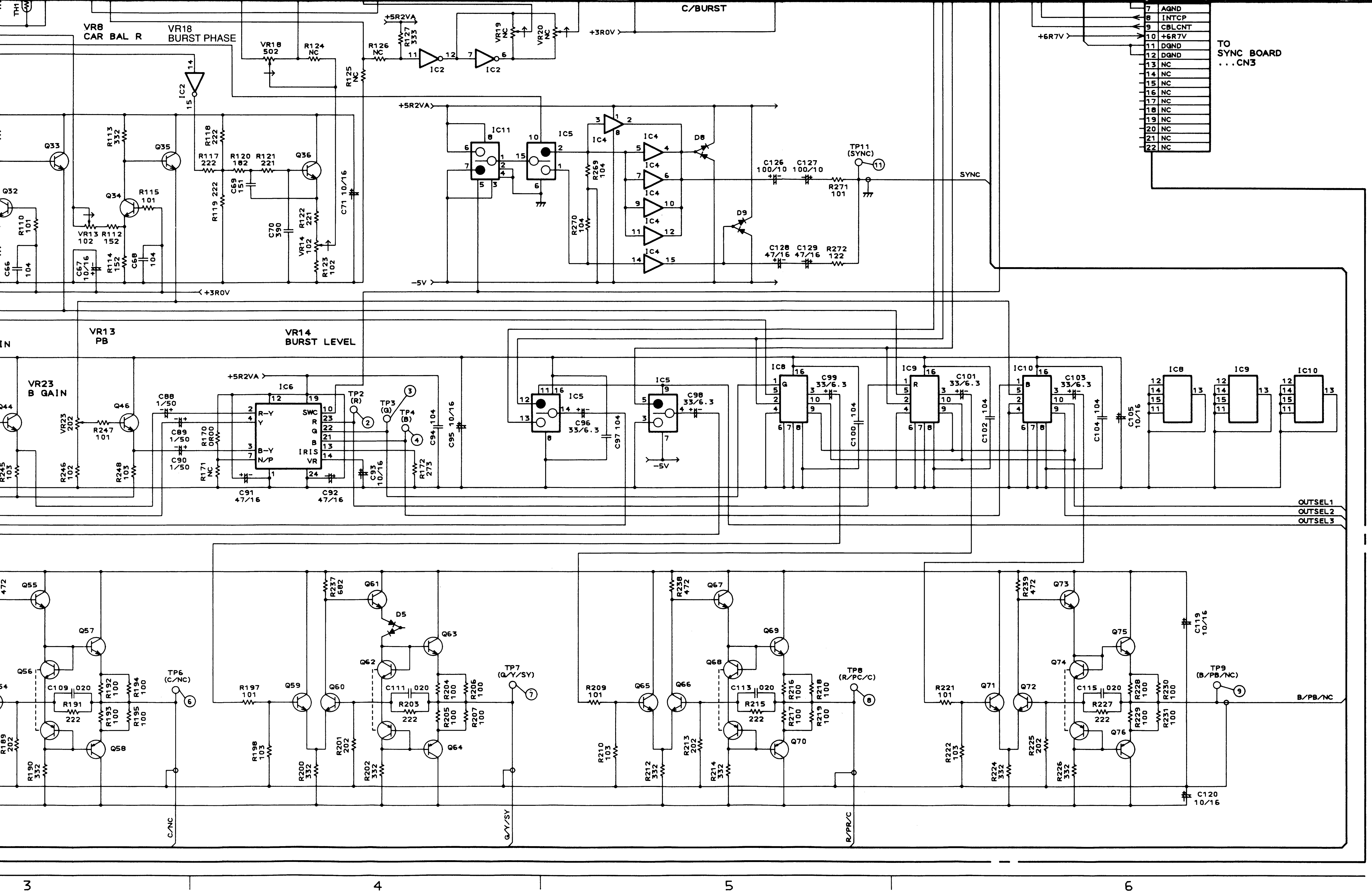
IC1	E2
IC2	C4, D5, E3, E4
IC3	C4
IC4	B5, C5
IC5	B5
IC6	B4
IC8	B5, B6
IC9	B6
IC10	B6
IC11	C4
Q1	E2
Q3	E3
Q4	E4
Q5	E4
Q6	E4
Q7	E4
Q8	D2
Q9	D2
Q11	D3
Q12	D3
Q13	D3
Q14	D4
Q15	D4
Q16	D4
Q17	D4
Q18	D4
Q19	D4
Q20	D4
Q21	D4
Q22	C2
Q23	C2
Q24	C3
Q25	C3
Q26	C5
Q27	C5
Q28	C5
Q29	B2
Q30	B2
Q32	B3
Q33	C3
Q34	B3
Q35	C3
Q36	C4
Q42	B3
Q44	B3
Q46	B3
Q47	A2
Q48	A2
Q49	A2
Q50	A2
Q51	A2
Q52	A2
Q53	A3
Q54	A3
Q55	A3
Q56	A3
Q57	A3
Q58	A3
Q59	A4
Q60	A4
Q61	A4
Q62	A4
Q63	A4
Q64	A4
Q65	A5
Q66	A5
Q67	A5
Q68	A5
Q69	A5
Q70	A5
Q71	A6
Q72	A6
Q73	A6
Q74	A6
Q75	A6
Q76	A6
Q77	C5
Q78	D2
Q79	D3
Q80	D3
Q81	B2
Q82	C2
Q83	B3
Q84	B3
Q85	D2
Q86	D3
Q87	C2
D1	D4
D3	A2
D5	A4
D8	C5
D9	B5

ENCODER SECTION

	'B	C	E
Q16	-0.1	5.2	-0.8
17	-0.7	2.6	-0.8
18	2.6	5.2	1.8
20	0.4.	5.2	-0.2
21	-0.8	-5.2	-0.2
36	2.3	6.7	1.7
71	-0.1	5.2	-0.8
72	-0.1	1.3	-0.8
73	1.3	5.2	0.5
75	0.5	5.2	-0.1
76	-0.7	-5.2	-0.1
66	4.6	-0.1	3.8

	Q19	Q74
Pin 1	-1.9	-0.1
2	0.4	0.5
3	-0.8	-0.7
4	-0.2	-0.1
5	-0.8	-0.7
6	0.4	0.5


VRSTSW 13
COMPG 14
SY/COMPG 15
COMP 16
SY/COMP 17
C/NCGND 18
NC 19
C/NC 20
NC 21
SYNCG 22
AGND 23
SYNC 24
TO MOTHER BOARD ...CN15
VR8 CAR BAL R
PSYNC
CHR1
+6.7V
VR25 W-CLIP
R268 682
Q87
C57 10/16
R97 221
L4 5.6
R98 221
Q29
C58 470
C59 470
C60 150
R101 103
C62 10/16
R102 682
C61 080
R99 392
VR10 102
R100 222
VR10 Y
R103 332
Q30
R263 682
Q81
R104 242
C64 104
Q82
R264 101
R265 472
Q83
Q84
VR25 103
R266 0R00
C125 104
R267 223
R105 101
R108 332
Q33
Q32
R107 152
VR12 102
R109 152
R110 101
C65 10/16
C66 104
VR12 PR
R113 332
Q35
Q34
R115 101
VR13 102
R112 152
R114 152
C67 10/16
C68 104
VR21 G GAIN
VR22 R GAIN
VR13 PB
VR23 B GAIN
C122 10/16
VR21 202
Q42
R241 101
R240 102
R242 103
VR22 202
Q44
R244 101
R243 102
R245 103
VR23 202
Q46
R247 101
R246 102
R248 103
C88 1/50
-5V
+5R2VA
R235 682
Q49
D3
Q51
Q50
R173 101
Q47
Q48
C107 020
R179 222
R180 100
R181 100
R182 100
R183 100
TP5 (SY/COMP)
5
C106 10/16
R174 103
R176 332
R177 202
R178 332
Q52
C118 10/16
SY/COMP
R185 101
Q53
Q54
R236 472
Q55
Q57
Q56
C109 020
R191 222
R192 100
R193 100
R194 100
R195 100
Q58
R187 103
R188 332
R189 202
R190 332
C/NC
B
A
1
2
3


C/BURST
VR8
CAR BAL R
VR18
BURST PHASE
VR18 502
R124 NC
R126 NC
R127 333
+5R2VA
IC2
VR19 NC
VR20 NC
+3R0V
R125 NC
+6R7V
7 AGND
8 INTCP
9 CBLCNT
10 +6R7V
11 DGND
12 DGND
13 NC
14 NC
15 NC
16 NC
17 NC
18 NC
19 NC
20 NC
21 NC
22 NC
TO
SYNC BOARD
...CN3
R113 332
Q33
Q35
R118 222
R117 222
R120 182
R121 221
Q36
Q32
Q34
R115 101
C69 151
R119 222
C71 10/16
R110 101
VR13 102
R112 152
C70 390
R122 221
VR14 102
R123 102
C66 104
C67 10/16
R114 152
C68 104
+3R0V
IC11
IC5
IC4
D8
C126 100/10
C127 100/10
R271 101
TP11 (SYNC)
11
SYNC
R269 104
R270 104
D9
C128 47/16
C129 47/16
R272 122
-5V
VR13
PB
VR14
BURST LEVEL
IN
VR23
B GAIN
Q44
Q46
VR23 202
R247 101
R245 103
R246 102
R248 103
C88 1/50
C89 1/50
C90 1/50
R170 0R00
R171 NC
IC6
R-Y
Y
B-Y
N/P
SWC
R
G
B
IRIS
VR
C91 47/16
C92 47/16
TP2 (R)
TP3 (G)
TP4 (B)
2
3
4
C93 10/16
R172 273
C94 104
C95 10/16
IC5
C96 33/6.3
C97 104
C98 33/6.3
IC8
IC9
IC10
G
R
B
C99 33/6.3
C101 33/6.3
C103 33/6.3
C100 104
C102 104
C104 104
C105 10/16
OUTSEL1
OUTSEL2
OUTSEL3
Q55
Q57
Q56
C109 020
R191 222
R192 100
R193 100
R194 100
R195 100
R189 202
R190 332
Q58
TP6 (C/NC)
6
C/NC
R197 101
R198 103
Q59
Q60
R237 682
Q61
D5
Q62
Q63
C111 020
R203 222
R204 100
R205 100
R206 100
R207 100
R200 332
R201 202
R202 332
Q64
TP7 (G/Y/SY)
7
G/Y/SY
R209 101
R210 103
Q65
Q66
R238 472
Q67
Q68
Q69
C113 020
R215 222
R216 100
R217 100
R218 100
R219 100
R212 332
R213 202
R214 332
Q70
TP8 (R/PC/C)
8
R/PR/C
R221 101
R222 103
Q71
Q72
R239 472
Q73
Q74
Q75
C115 020
R227 222
R228 100
R229 100
R230 100
R231 100
R224 332
R225 202
R226 332
Q76
C119 10/16
C120 10/16
TP9 (B/PB/NC)
9
B/PB/NC
3
4
5
6

Note: **The value indicated in the schematic diagram should be read as follows:**

☐ ☐ ☐

- Multiplier (0 - 5)
- 2nd. Significant Digit (0 - 9)
- 1st. Siginificant Digit (1 - 9)

<Example>

For Resistor:

330 → 33×10^0 = 33 Ω

561 → 56×10^1 = 560 Ω

123 → 12×10^3 = 12k Ω

0R00 = 0 Ω

For Capacitor:

820 → 82×10^0 = 82 pF

102 → 10×10^2 = 1000 pF = 0.001 μF

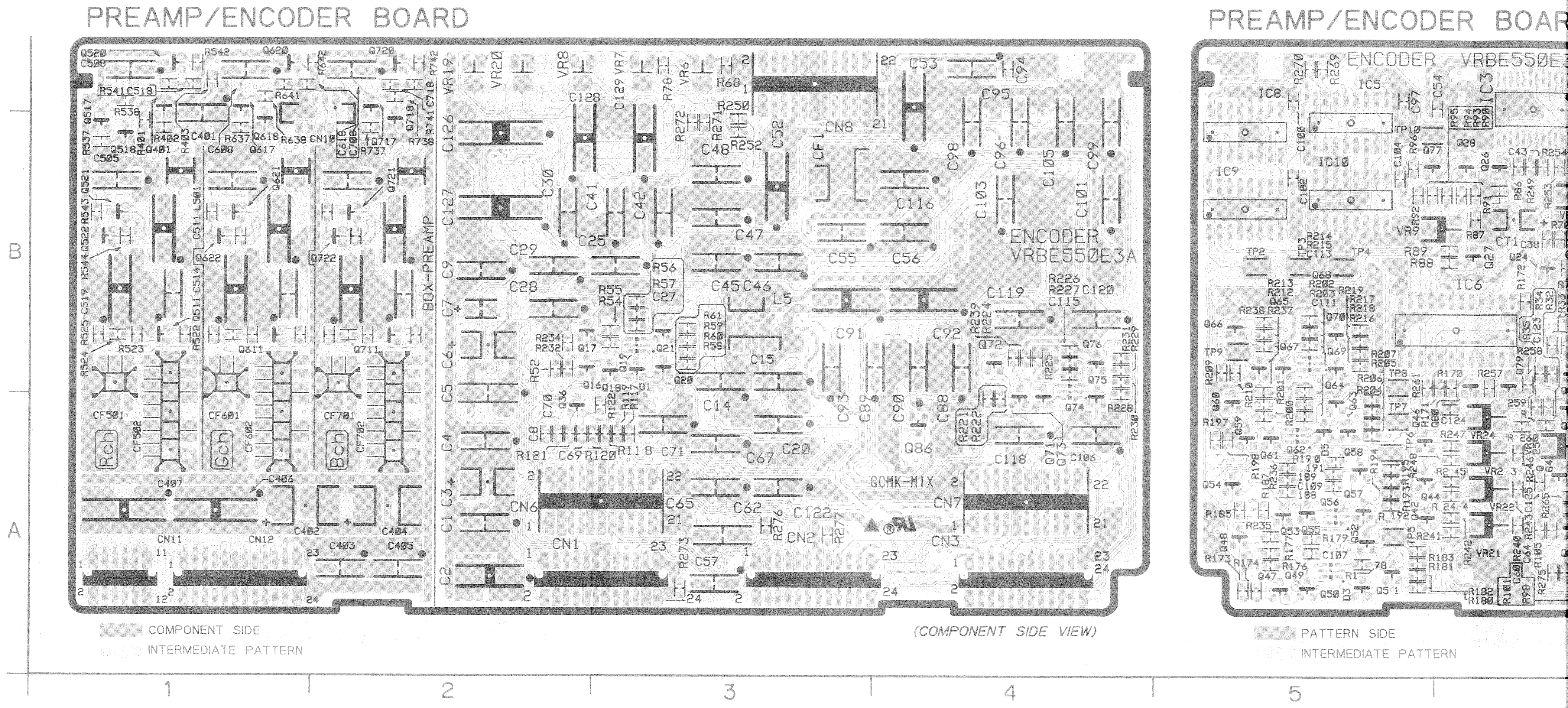
104 → 10×10^4 = 100000 pF = 0.1 μF

The suffix attached to capacitance indicates a type of capacitor.

CONDUCTOR VIEW OF PREAMP/ENCODER BOARD (WV-E550E)

< Index>
PREAMP SECTION

IC401	A7	Q704	B7
Q401	C1	Q705	B7
Q402	A8	Q706	B7
Q403	A8	Q707	B7
Q404	A7	Q708	B8
Q405	A7	Q709	B7
Q501	B8	Q710	B8
Q502	C8	Q711	B2
Q503	B8	Q712	B7
Q504	B8	Q713	B7
Q505	B8	Q714	A8
Q506	B8	Q715	A7
Q507	B8	Q716	A8
Q508	B8	Q717	C2
Q509	B8	Q718	B2
Q510	B8	Q719	C7
Q511	B1	Q720	C2
Q512	B8		
Q513	B8		
Q514	A8		
Q515	A8		
Q516	A8		
Q517	B1		
Q518	B1		
Q519	C8		
Q520	C1		
Q601	B8		
Q602	C8		
Q603	B8		
Q604	B8		
Q605	B8		
Q606	B8		
Q607	B8		
Q608	B8		
Q609	B8		
Q610	B8		
Q611	B1		
Q612	B8		
Q613	B8		
Q614	A8		
Q615	A8		
Q616	A8		
Q617	C1		
Q618	B1		
Q619	C8		
Q620	C1		
Q701	B7		
Q702	C7		
Q703	B8		

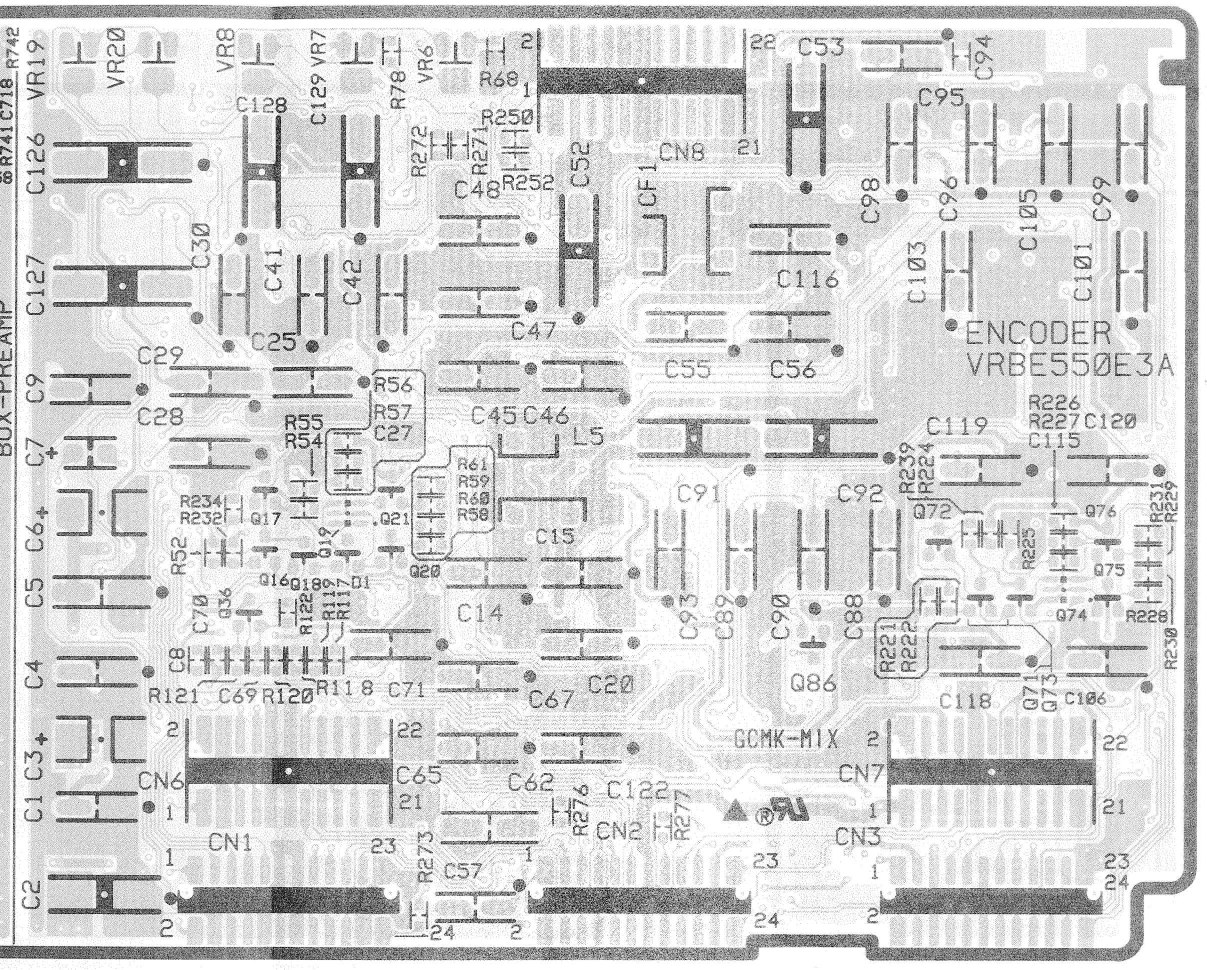

PREAMP/ENCODER BOARD
PREAMP/ENCODER BOAR
ENCODER VRBE550E3A
BOX-PREAMP
GCMK-MIX
Rch
Gch
Bch
CN1
CN2
CN3
CN6
CN7
CN8
CN10
CN11
CN12
ENCODER VRBE550E
COMPONENT SIDE
INTERMEDIATE PATTERN
(COMPONENT SIDE VIEW)
PATTERN SIDE
INTERMEDIATE PATTERN
B
A
1
2
3
4
5

< Index>
ENCODER SECTION

IC1	A7	Q1	A7	Q15	B7	Q27	B6	Q48	A5	Q60	A5	Q72	B4	Q84	A6
IC2	A7	Q3	B7	Q16	B2	Q28	B6	Q49	A5	Q61	A5	Q73	A4	Q85	B6
IC3	C6	Q4	B7	Q17	B2	Q29	A6	Q50	A5	Q62	A5	Q74	B4	Q86	A4
IC4	C7	Q5	B7	Q18	B3	Q30	A6	Q51	A5	Q63	A5	Q75	A4	Q87	A6
IC5	B5	Q6	B7	Q19	B3	Q32	A7	Q52	A5	Q64	A5	Q76	B4	D1	B3
IC6	B6	Q7	B7	Q20	B3	Q33	A7	Q53	A5	Q65	B5	Q77	B5	D3	A5
IC8	B5	Q8	B6	Q21	B3	Q34	A6	Q54	A5	Q66	B5	Q78	A6	D5	A5
IC9	B5	Q9	A6	Q22	B6	Q35	A6	Q55	A5	Q67	B5	Q79	B6	D8	B7
IC10	B5	Q11	B6	Q23	B7	Q36	A2	Q56	A5	Q68	B5	Q80	B6	D9	B7
IC11	C7	Q12	B7	Q24	B6	Q42	A5	Q57	A5	Q69	B5	Q81	A6		
		Q13	B7	Q25	B6	Q44	A5	Q58	A5	Q70	B5	Q82	A6		
		Q14	B7	Q26	B6	Q47	A5	Q59	A5	Q71	A4	Q83	A6		

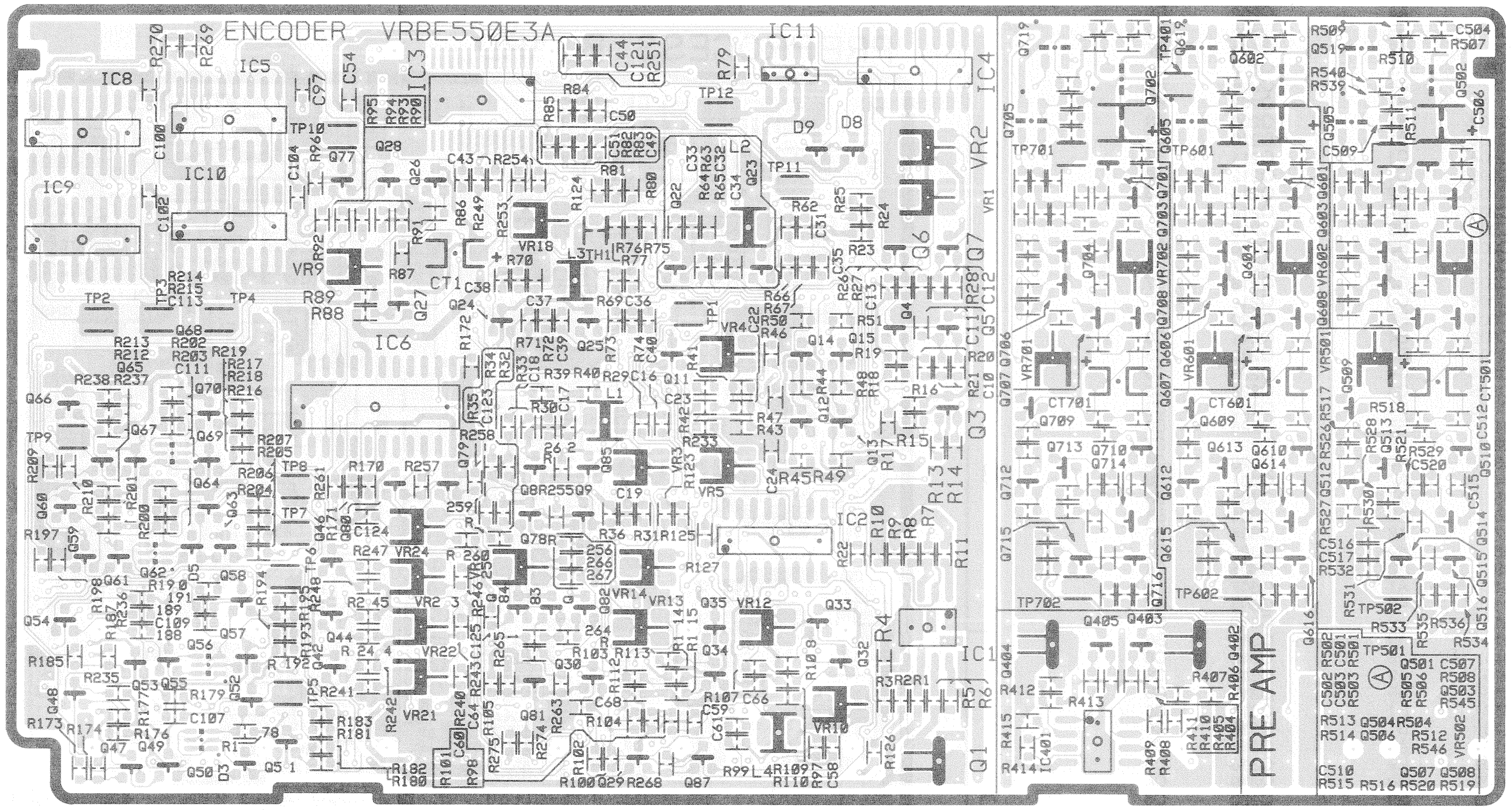
CONDUCTOR VIEW OF PREAMP/ENCODER BOARD (WV-E550E)

ARD


ENCODER
VRBE550E3A
GCMK-MIX
BOX-PREAMP
CN1
CN2
CN3
CN6
CN7
CN8
CF1
L5

(COMPONENT SIDE VIEW)

PREAMP/ENCODER BOARD


ENCODER VRBE550E3A
PRE AMP
IC1
IC2
IC3
IC4
IC5
IC6
IC8
IC9
IC10
IC11
IC401
VR1
VR2
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TP9
TP10
TP11
TP12
TP501
TP502
TP601
TP602
TP701
TP702
Ⓐ

▨ PATTERN SIDE

▨ INTERMEDIATE PATTERN

(PATTERN SIDE VIEW)

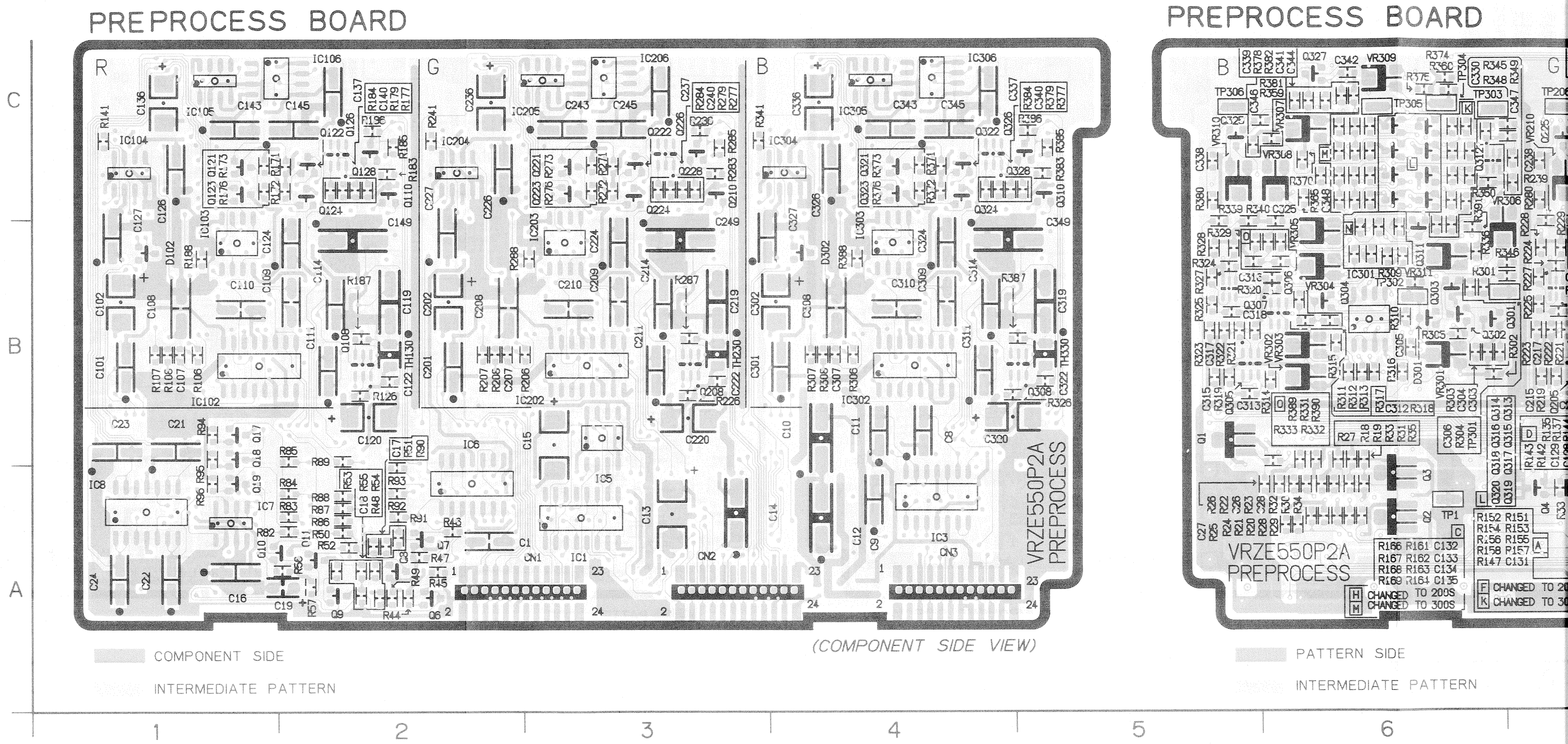
2 3 4 5 6 7 8

7	B6	Q48	A5	Q60	A5	Q72	B4	Q84	A6
8	B6	Q49	A5	Q61	A5	Q73	A4	Q85	B6
9	A6	Q50	A5	Q62	A5	Q74	B4	Q86	A4
0	A6	Q51	A5	Q63	A5	Q75	A4	Q87	A6
2	A7	Q52	A5	Q64	A5	Q76	B4	D1	B3
3	A7	Q53	A5	Q65	B5	Q77	B5	D3	A5
4	A6	Q54	A5	Q66	B5	Q78	A6	D5	A5
5	A6	Q55	A5	Q67	B5	Q79	B6	D8	B7
6	A2	Q56	A5	Q68	B5	Q80	B6	D9	B7
2	A5	Q57	A5	Q69	B5	Q81	A6		
4	A5	Q58	A5	Q70	B5	Q82	A6		
7	A5	Q59	A5	Q71	A4	Q83	A6		

CONDUCTOR VIEW OF PREPROCESS BOARD (WV-E550E)

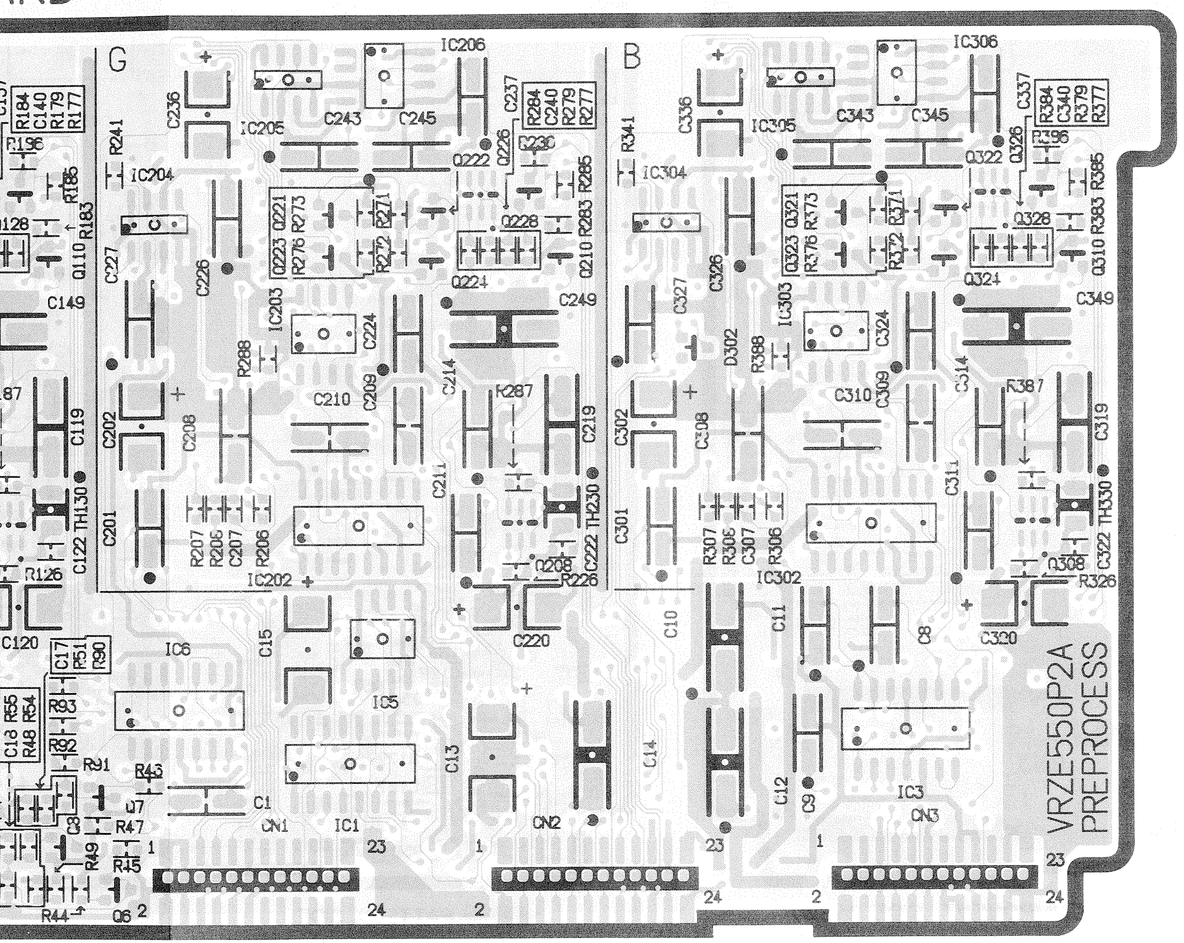
< Index>
PREPROCESS BOARD

IC1	A3
IC3	A4
IC5	B3
IC6	A2
IC7	A1
IC8	A1
IC101	B9
IC102	B1
IC103	B1
IC104	C1
IC105	C1
IC106	C2
IC201	B7
IC202	B3
IC203	B3
IC204	C2
IC205	C3
IC206	C3
IC301	B6
IC302	B4
IC303	B4
IC304	C4
IC305	C4
IC306	C4
Q1	B5
Q2	A6
Q3	A6
Q4	A7
Q5	A7
Q6	A2
Q7	A2
Q8	A2
Q9	A2
Q10	A1
Q11	A2
Q12	A9
Q13	A9
Q14	A9
Q15	A9
Q16	A9
Q17	B1
Q18	B1
Q19	A1
Q101	B9
Q102	B9
Q103	B9
Q104	B8
Q105	B8
Q106	B8
Q107	B8
Q108	B2
Q110	C2
Q111	B9
Q112	C9
Q113	C9
Q114	C9
Q115	C9
Q116	C9
Q117	C9
Q118	C9
Q119	C9
Q120	C9
Q121	C1
Q122	C2
Q123	C1
Q124	C2
Q125	C8
Q126	C2
Q127	C8
Q128	C2
Q201	B8
Q202	B8
Q203	B8
Q204	B7
Q205	B7
Q206	B7
Q207	B7
Q208	B3
Q210	C3
Q211	B7
Q212	C8
Q213	C8
Q214	C7
Q215	C8
Q216	C7
Q217	C8
Q218	C7
Q219	C8
Q220	C7
Q221	C3
Q222	C3
Q223	C3
Q224	C3
Q225	C7
Q226	C3
Q227	C7
Q228	C3
Q301	B6
Q302	B6
Q303	B6
Q304	B6
Q305	B5
Q306	B6
Q307	B5
Q308	B5
Q310	C5
Q311	B6
Q312	C6
Q313	C6
Q314	C6
Q315	C6
Q316	C6
Q317	C6
Q318	C6
Q319	C6
Q320	C6
Q321	C4
Q322	C4
Q323	C4
Q324	C4
Q325	C5
Q326	C4
Q327	C6
Q328	C5
D2	A7
D101	B9
D102	B1
D201	B8
D301	B6
D302	B4


PREPROCESS BOARD
PREPROCESS BOARD
C
B
A
1
2
3
4
5
6
R
G
B
VRZE550P2A PREPROCESS
VRZE550P2A PREPROCESS
COMPONENT SIDE
INTERMEDIATE PATTERN
(COMPONENT SIDE VIEW)
PATTERN SIDE
INTERMEDIATE PATTERN
CHANGED TO 200S
CHANGED TO 300S

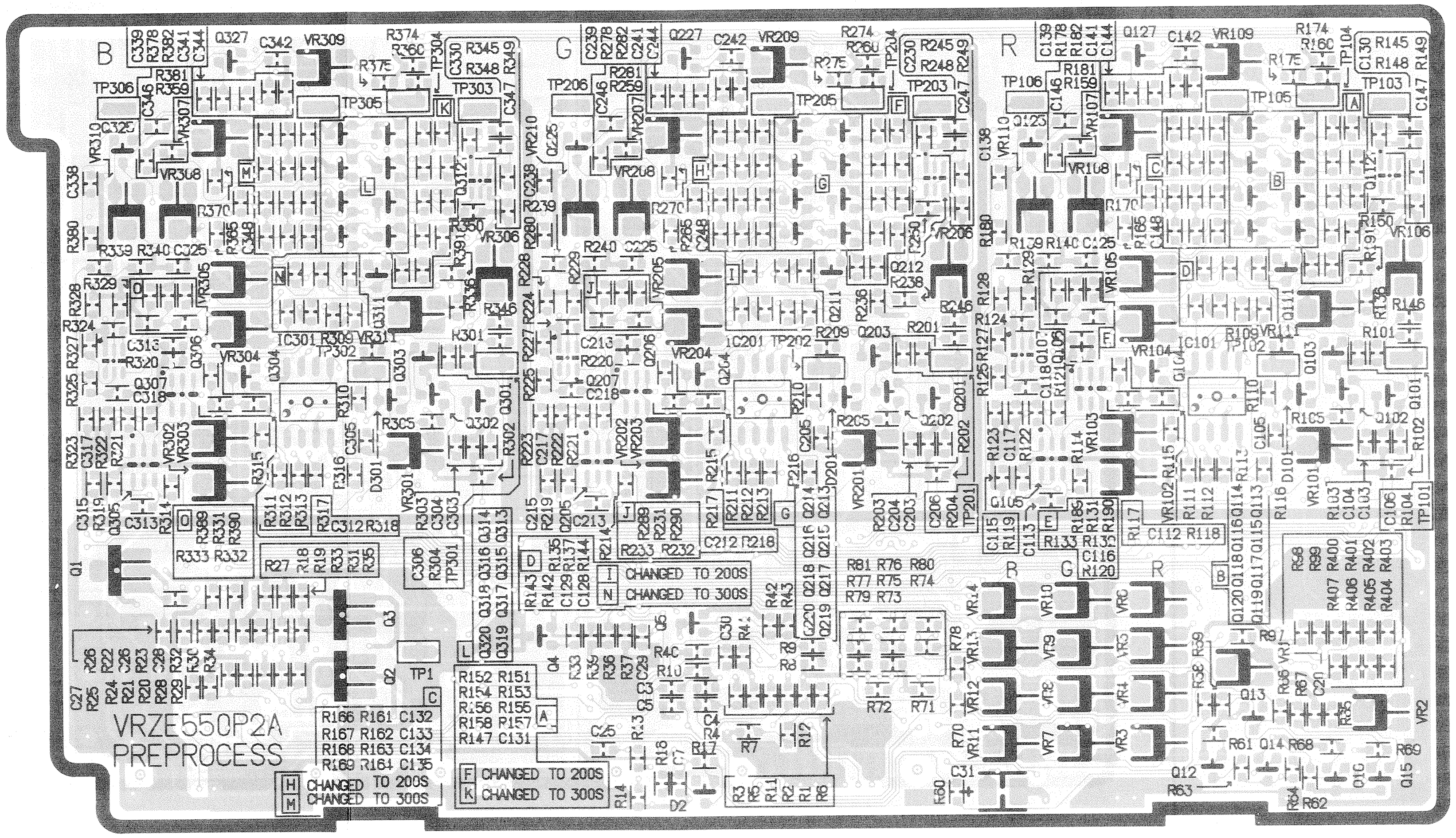
CONDUCTOR VIEW OF PREPROCESS BOARD (WV-E550E)

ARD


G
B
IC206
IC205
IC204
IC203
IC202
IC306
IC305
IC304
IC303
IC302
IC6
IC5
IC3
IC1
CN1
CN2
CN3
VRZE550P2A
PREPROCESS

(COMPONENT SIDE VIEW)

PREPROCESS BOARD


B
G
R
VR309
VR209
VR109
IC301
IC201
IC101
TP303
TP203
TP103
TP1
VRZE550P2A
PREPROCESS
H CHANGED TO 200S
M CHANGED TO 300S
F CHANGED TO 200S
K CHANGED TO 300S
I CHANGED TO 200S
N CHANGED TO 300S

(PATTERN SIDE VIEW)

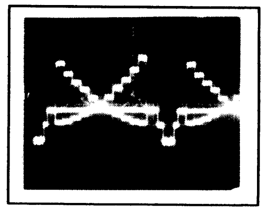
▨ PATTERN SIDE

▨ INTERMEDIATE PATTERN

2 3 4 5 6 7 8 9

SCHEMATIC DIAGRAM OF PREPROCES

PREPROCESS BOARD



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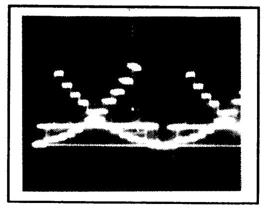

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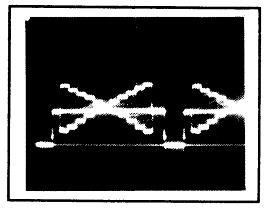
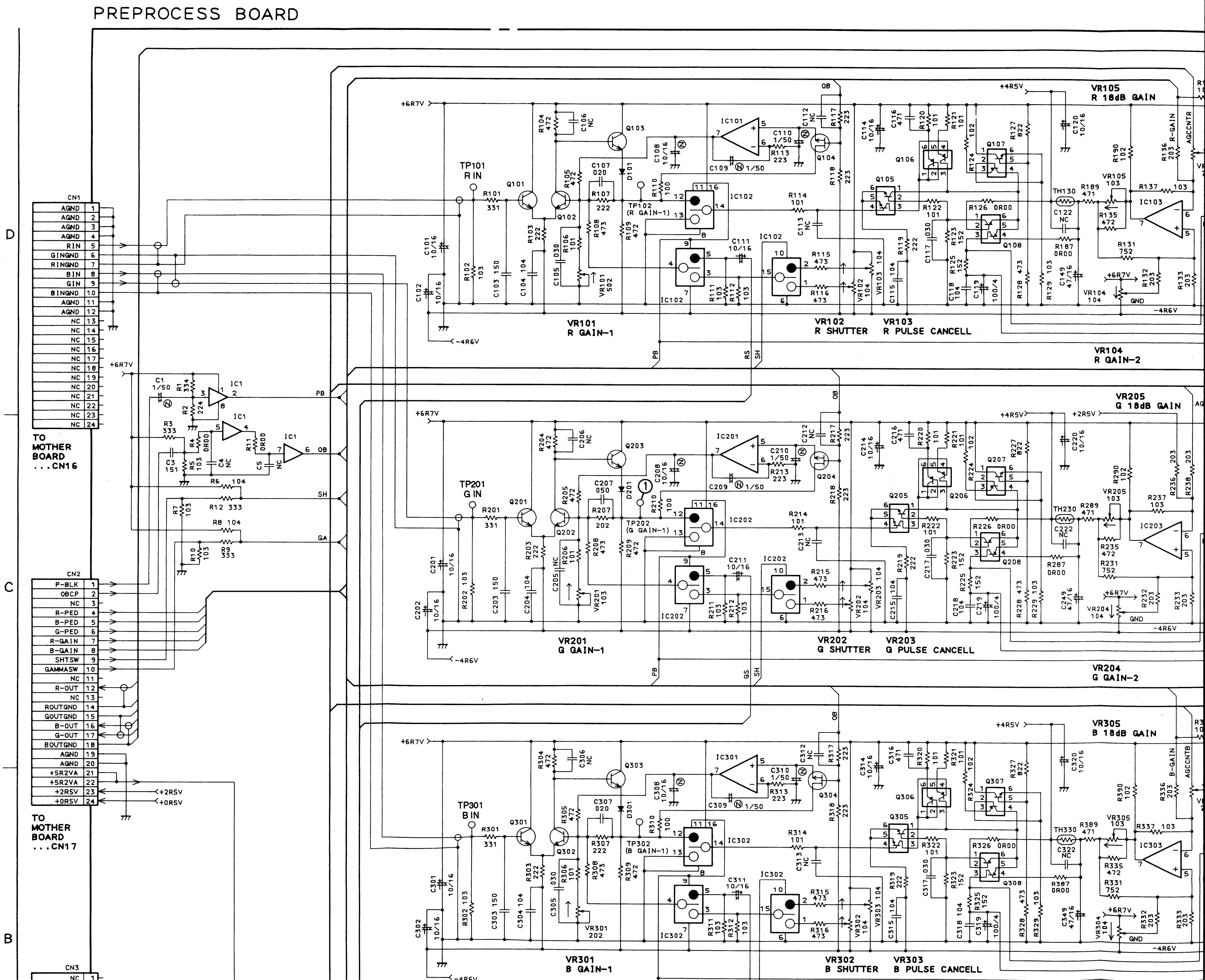


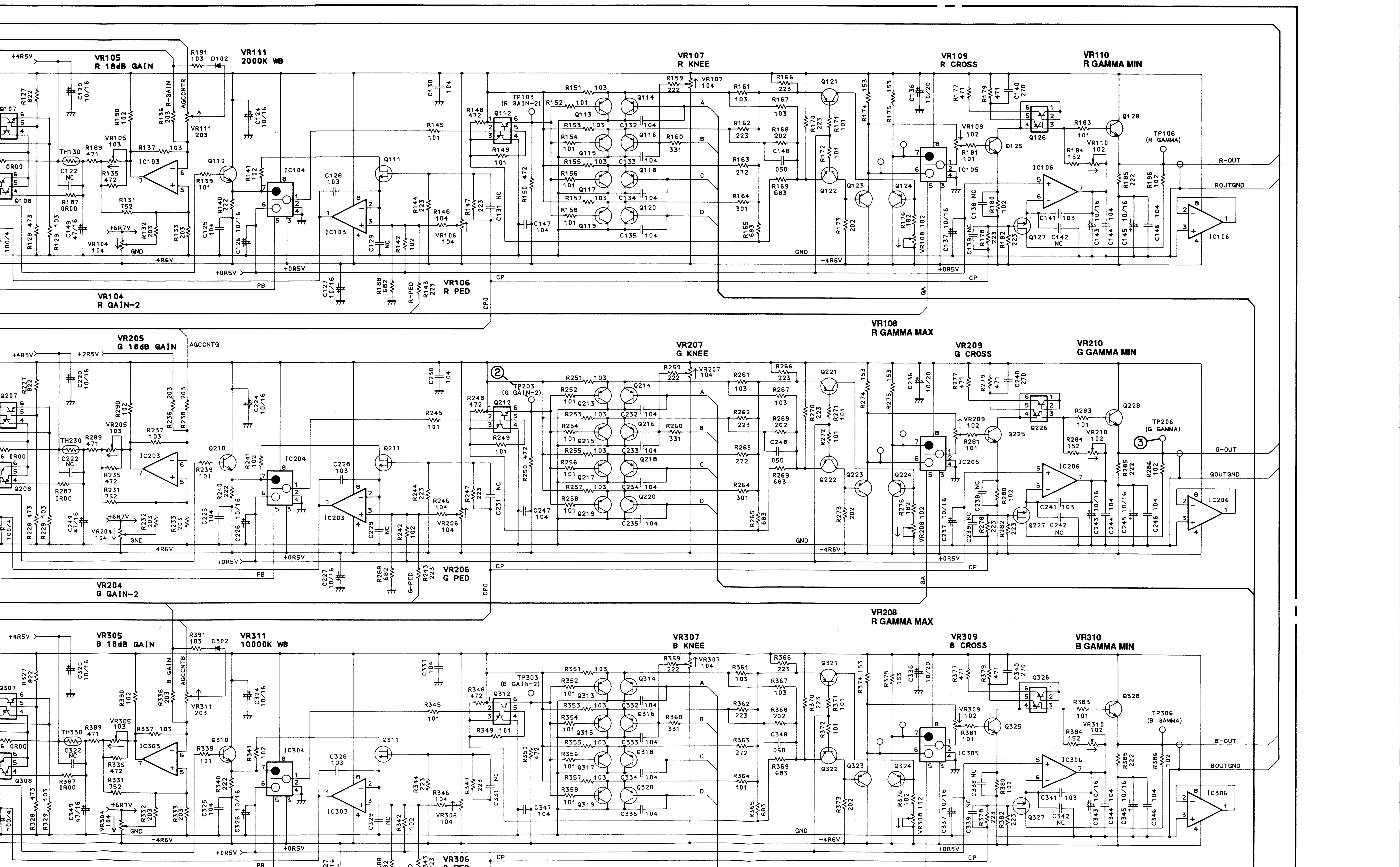
3. 10µsec/DIV 0.5V/DIV

< Index>
PREPROCESS BOARD

IC1	A1, C1, D1	Q201	C2
IC3	A2	Q202	C2
IC5	A3	Q203	C2
IC6	A5	Q204	C3
IC7	A6	Q205	C3
IC8	A7	Q206	C3
IC101	A3	Q207	C3
IC102	D2, D3	Q208	C3
IC103	D4	Q210	C4
IC104	D4	Q211	C4
IC105	D6	Q212	C5
IC106	D7	Q213	C5
IC201	A3, C3	Q214	C5
IC202	C2, C3	Q215	C5
IC203	C4	Q216	C5
IC204	C4	Q217	C5
IC205	C6	Q218	C5
IC206	C7	Q219	C5
IC301	A3, B3	Q220	C5
IC302	B2, B3	Q221	C6
IC303	B4	Q222	C6
IC304	B4	Q223	C6
IC305	B6	Q224	C6
IC306	B7	Q225	C6
Q1	B2	Q226	C6
Q2	A2	Q227	C6
Q3	B3	Q228	C7
Q4	A3	Q301	B2
Q5	B4	Q302	B2
Q6	B4	Q303	B2
Q7	A4	Q304	B3
Q8	A4	Q305	B3
Q9	B4	Q306	B3
Q10	A4	Q307	B3
Q11	A4	Q308	B3
Q12	A4	Q310	B4
Q13	A4	Q311	B4
Q14	A5	Q312	B5
Q15	A5	Q313	B5
Q16	A5	Q314	B5
Q17	A6	Q315	B5
Q18	A6	Q316	B5
Q19	A6	Q317	B5
Q101	D2	Q318	B5
Q102	D2	Q319	B5
Q103	D2	Q320	B5
Q104	D3	Q321	B6
Q105	D3	Q322	B6
Q106	D3	Q323	B6

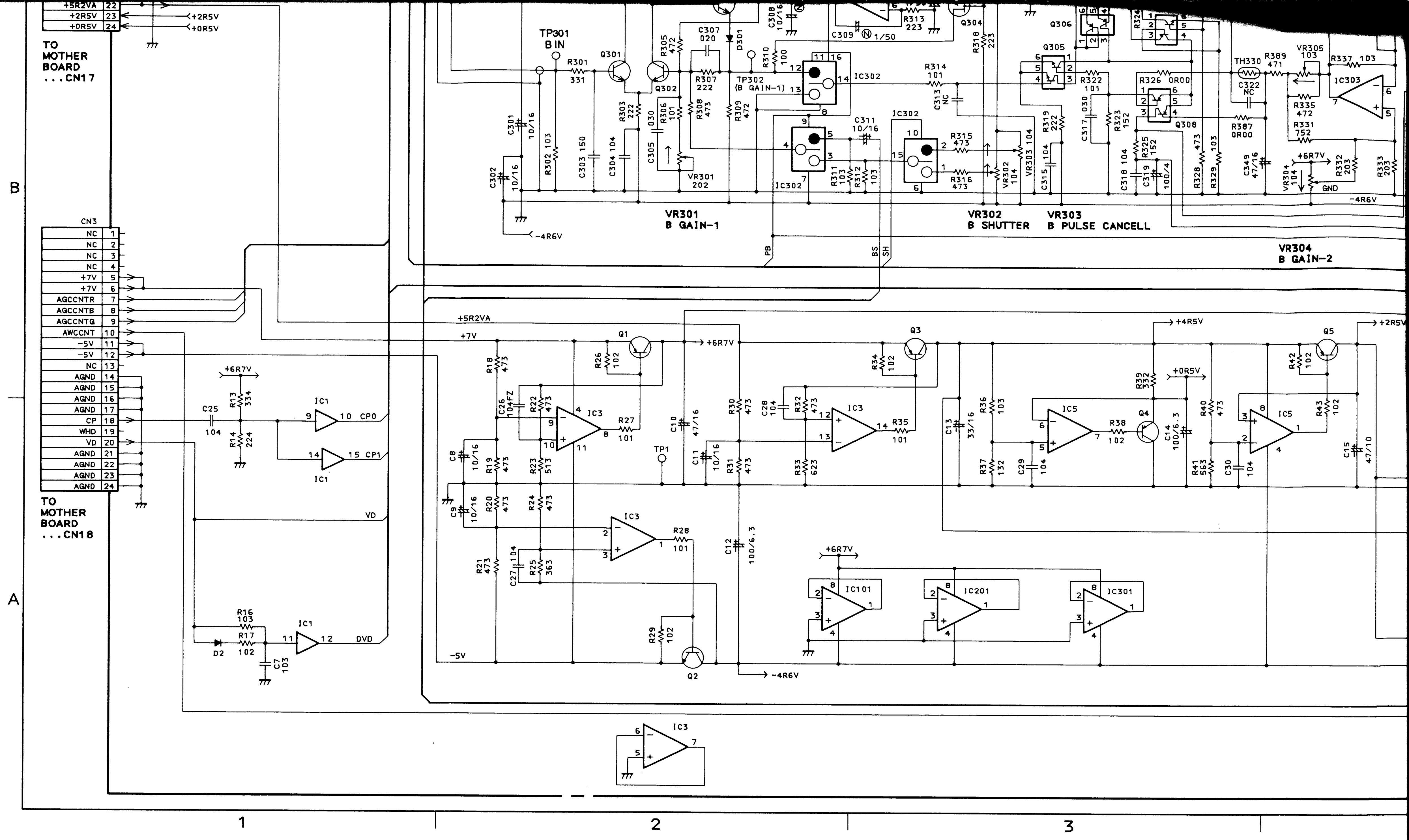

PREPROCESS BOARD
D
C
B
CN1
AGND
RIN
GINGND
RINGND
BIN
GIN
BINGND
NC
TO MOTHER BOARD ...CN16
CN2
P-BLK
OBCP
R-PED
B-PED
G-PED
R-GAIN
B-GAIN
SHTSW
GAMMASW
R-OUT
ROUTGND
GOUTGND
B-OUT
G-OUT
BOUTGND
+5R2VA
+2R5V
+0R5V
TO MOTHER BOARD ...CN17
CN3
+6R7V
-4R6V
+4R5V
+2R5V
IC1
PB
OB
SH
GA
TP101 R IN
TP201 G IN
TP301 B IN
TP102 (R GAIN-1)
TP202 (G GAIN-1)
TP302 (B GAIN-1)
IC101
IC102
IC103
IC201
IC202
IC203
IC301
IC302
IC303
VR101 R GAIN-1
VR102 R SHUTTER
VR103 R PULSE CANCELL
VR104 R GAIN-2
VR105 R 18dB GAIN
VR201 G GAIN-1
VR202 G SHUTTER
VR203 G PULSE CANCELL
VR204 G GAIN-2
VR205 G 18dB GAIN
VR301 B GAIN-1
VR302 B SHUTTER
VR303 B PULSE CANCELL
VR305 B 18dB GAIN
R-GAIN
AGCCNTR
B-GAIN
AGCCNTB
RS
GS
GND
TH130
TH230
TH330

M OF PREPROCESS BOARD (WV-E550E)



+4R5V
VR105
R 18dB GAIN
R191 103 D102
VR111
2000K WB
VR107
R KNEE
VR109
R CROSS
VR110
R GAMMA MIN
R-GAIN
AGCCNTR
TP103 (R GAIN-2)
Q107
Q108
TH130
IC103
IC104
Q110
Q111
Q112
Q113
Q114
Q115
Q116
Q117
Q118
Q119
Q120
Q121
Q122
Q123
Q124
Q125
Q126
Q127
Q128
IC105
IC106
TP106 (R GAMMA)
R-OUT
ROUTGND
+6R7V
GND
-4R6V
+0R5V
PB
CP
CPD
GA
VR104
R GAIN-2
VR106
R PED
R-PED
VR108
R GAMMA MAX
A
B
C
D
VR205
G 18dB GAIN
AGCCNTG
+2R5V
VR207
G KNEE
VR209
G CROSS
VR210
G GAMMA MIN
②
TP203 (G GAIN-2)
Q207
Q208
TH230
IC203
IC204
Q210
Q211
Q212
Q213
Q214
Q215
Q216
Q217
Q218
Q219
Q220
Q221
Q222
Q223
Q224
Q225
Q226
Q227
Q228
IC205
IC206
③
TP206 (G GAMMA)
G-OUT
GOUTGND
VR204
G GAIN-2
VR206
G PED
G-PED
VR208
R GAMMA MAX
VR305
B 18dB GAIN
R391 103 D302
VR311
10000K WB
B-GAIN
AGCCNTB
VR307
B KNEE
VR309
B CROSS
VR310
B GAMMA MIN
TP303 (B GAIN-2)
Q307
Q308
TH330
IC303
IC304
Q310
Q311
Q312
Q313
Q314
Q315
Q316
Q317
Q318
Q319
Q320
Q321
Q322
Q323
Q324
Q325
Q326
Q327
Q328
IC305
IC306
TP306 (B GAMMA)
B-OUT
BOUTGND
VR306

Q7	A4
Q8	A4
Q9	B4
Q10	A4
Q11	A4
Q12	A4
Q13	A4
Q14	A5
Q15	A5
Q16	A5
Q17	A6
Q18	A6
Q19	A6
Q101	D2
Q102	D2
Q103	D2
Q104	D3
Q105	D3
Q106	D3
Q107	D3
Q108	D3
Q110	D4
Q111	D4
Q112	D5
Q113	D5
Q114	D5
Q115	D5
Q116	D5
Q117	D5
Q118	D5
Q119	D5
Q120	D5
Q121	D6
Q122	D6
Q123	D6
Q124	D6
Q125	D6
Q126	D6
Q127	D6
Q128	D7
Q304	B3
Q305	B3
Q306	B3
Q307	B3
Q308	B3
Q310	B4
Q311	B4
Q312	B5
Q313	B5
Q314	B5
Q315	B5
Q316	B5
Q317	B5
Q318	B5
Q319	B5
Q320	B5
Q321	B6
Q322	B6
Q323	B6
Q324	B6
Q325	B6
Q326	B6
Q327	B6
Q328	B7
D2	A1
D101	D2
D102	D4
D201	C2
D301	B2
D302	C4


+5R2VA 22
+2R5V 23
+0R5V 24
+2R5V
+0R5V
TO MOTHER BOARD ...CN17
TP301
B IN
R301 331
Q301
Q305 472
Q302
R303 222
C305 030
R306 101
C307 020
R307 222
R308 473
R309 472
D301
R310 100
C308 10/16
C309 1/50
R313 223
Q304
R318 223
IC302
TP302 (B GAIN-1)
C301 10/16
C302 10/16
R302 103
C303 150
C304 104
VR301 202
C311 10/16
R311 103
R312 103
R314 101
C313 NC
R315 473
R316 473
VR302 104
VR303 104
R319 222
C315 104
Q306
Q305
R322 101
C317 030
R323 152
C318 104
C319 100/4
R325 152
R326 0R00
Q308
R328 473
R329 103
TH330
R389 471
VR305 103
R337 103
C322 NC
R335 472
R331 752
R387 0R00
C349 47/16
VR304 104
+6R7V
R332 203
R333 203
GND
IC303
-4R6V
VR301
B GAIN-1
VR302
B SHUTTER
VR303
B PULSE CANCELL
VR304
B GAIN-2
PB
BS
SH
B
CN3
NC 1
NC 2
NC 3
NC 4
+7V 5
+7V 6
AGCCNTR 7
AGCCNTB 8
AGCCNTG 9
AWCCNT 10
-5V 11
-5V 12
NC 13
AGND 14
AGND 15
AGND 16
AGND 17
CP 18
WHD 19
VD 20
AGND 21
AGND 22
AGND 23
AGND 24
TO MOTHER BOARD ...CN18
+6R7V
C25 104
R13 334
R14 224
IC1
CP0
CP1
VD
R16 103
R17 102
D2
C7 103
DVD
+5R2VA
+7V
Q1
R18 473
R26 102
C26 104FZ
R22 473
IC3
R27 101
C8 10/16
R19 473
R23 513
C9 10/16
R20 473
R24 473
R21 473
C27 104
R25 363
R28 101
R29 102
Q2
-5V
-4R6V
C10 47/16
R30 473
C11 10/16
R31 473
TP1
C12 100/6.3
+6R7V
C28 104
R32 473
R33 623
R35 101
Q3
R34 102
+4R5V
C13 33/16
R36 103
R37 132
C29 104
IC5
R38 102
Q4
C14 100/6.3
R39 332
+0R5V
R40 473
R41 563
C30 104
Q5
R42 102
R43 102
+2R5V
C15 47/10
IC101
IC201
IC301
A
1
2
3

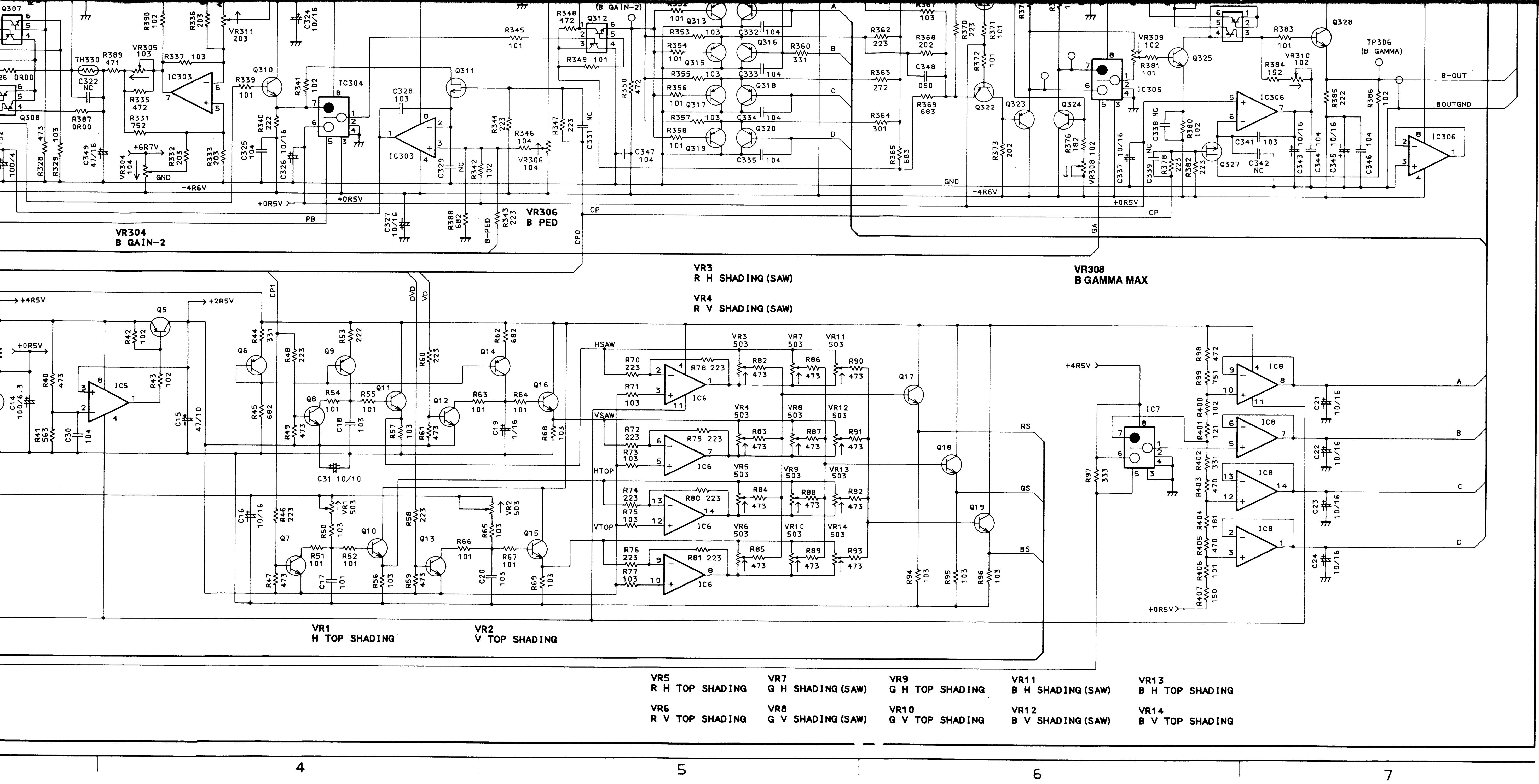
	B	C	E
Q1	6.3	6.7	7.0
2	-4.5	-4.5	-5.2
3	4.5	4.5	5.2
4	-0.2	0	0.5
5	3.9	2.5	4.6
6	5.8	5.8	6.5
7	1.0	4.1	2.5
8	1.0	3.1	2.5
9	5.8	3.2	6.4
10	4.1	6.7	3.8
11	3.2	6.7	2.6
12	0.9	0	2.5
13	0.9	4.3	2.5
14	5.9	0	6.4
15	4.8	0	3.8
16	2.9	-0.2	2.3
17	2.5	6.7	1.9
18	2.5	6.7	1.9
19	2.3	6.7	6.7
101	0	6.7	-0.7
102	0	1.3	-0.7
103	1.3	6.7	0.6
104	0	-2.2	0
110	1.9	6.7	1.1
111	0.6	-2.2	0.7
113	0	0	1.3
114	2.1	0	1.3
115	0.6	0	1.3
116	1.1	0	1.3
117	0.6	0	1.3
118	0.8	0	1.3
119	0.6	0	1.3
120	0.6	0	1.3
121	0.5	-3.6	1.2
122	0.5	-4.0	1.2
123	-3.5	-4.6	-2.9
124	-3.6	-4.6	-2.9
125	-2.9	5.6	-3.8
127	0.5	-2.2	1.1
128	2.3	6.7	1.5

	B	C	E
Q201	0	6.7	-0.6
202	0.1	1.3	-0.6
203	1.3	6.7	0.6
204	0	-2.2	0
210	2.1	6.7	1.3
211	0.6	-2.2	0.8
213	0.6	0	1.3
214	2.1	0	1.3
215	0.6	0	1.3
216	1.2	0	1.3
217	0.6	0	1.3
218	0.8	0	1.3
219	0.6	0	1.3
220	0.6	0	1.3
221	0.5	-3.2	1.2
222	0.5	-4.0	1.2
223	-3.5	-4.6	-2.8
224	-3.2	-4.6	-2.5
225	-2.9	5.6	-3.6
227	0.5	2.2	1.3
228	2.4	6.7	1.6
301	0	6.7	-0.7
302	0	1.4	-0.7
303	1.3	6.7	0.6
304	0	-2.2	0
310	2.0	6.7	1.3
311	0.6	-2.2	1.1
313	0.7	0	1.4
314	2.1	0	1.4
315	0.7	0	1.4
316	1.2	0	1.4
317	0.7	0	1.4
318	0.8	0	1.4
319	0.7	0	1.4
320	0.6	0	1.4
321	0.5	-3.2	1.2
322	0.5	-3.5	1.2.
323	-3.5	-4.6	-2.8
324	-3.2	-4.6	-2.5
325	-2.9	5.6	-3.6
327	0.5	-2.2	1.6
328	2.4	6.7	1.7

PREPROCESS BOARD

	IC5	IC6	IC7	IC8	IC101	IC201	IC301
Pin 1	3.0	2.4	1.2	0.6	5.5	5.5	5.5
2	2.5	0	0	0.6	5.5	5.5	5.5
3	2.5	2.5	0	0	0	0.3	0
4	0	6.7	0	0	-4.6	-4.6	-4.6
5	0	2.5	0	0	0	0	0
6	0	2.5	4.6	0	0	0	0
7	0	0	1.2	0	0.4	0.4	0.8
8	4.6	1.3	4.6	0	6.8	6.8	6.7
9		2.5		2.1			
10		2.5		2.1			
11		-4.6		-4.6			
12		2.5		0.8			
13		2.5		0			
14		1.3		0.8			

	Q105	Q106	Q107	Q108	Q112	Q126	Q205	Q206	Q207	Q208	Q212	Q226	Q305	Q306	Q307	Q308	Q312	Q326
Pin 1	5.2	6.0	6.8	5.2	6.7	5.4	5.2	6.0	6.7	0	6.7	5.4	5.2	6.0	6.7	0.1	6.7	5.5
2	0	6.0	5.1	5.2	0.7	5.4	0	6.0	5.2	4.6	0.8	5.4	0.1	6.0	5.2	4.6	1.1	5.5
3	6.0	5.2	5.7	4.5	1.3	2.3	6.0	5.2	5.8	1.6	1.4	2.4	6.0	5.2	5.7	1.9	1.7	2.4
4	0	6.0	5.2	1.4	0	5.5	0	0	5.2	4.5	0	5.4	0.1	6.0	5.2	4.5	0	5.5
5	-0.7	6.7	5.7	4.6	1.3	6.2	-0.7	1.8	5.7	5.2	1.4	6.2	-0.6	6.7	5.7	5.2	1.7	6.2
6	-0.7	6.7	5.1	0	0.7	6.2	-0.7	6.7	5.2	5.2	0.8	6.2	-0.6	6.7	5.2	5.2	1.1	6.2


VR304
B GAIN-2
VR306
B PED
VR308
B GAMMA MAX
TP306
(B GAMMA)
B-OUT
BOUTGND
IC303
IC304
IC305
IC306
+0R5V
-4R6V
+6R7V
GND
CP
PB
B-PED
CP0
GA
VR3
R H SHADING (SAW)
VR4
R V SHADING (SAW)
HSAW
VSAW
HTOP
VTOP
IC5
IC6
IC7
IC8
+4R5V
+2R5V
RS
GS
BS
A
B
C
D
VR1
H TOP SHADING
VR2
V TOP SHADING
VR5
R H TOP SHADING
VR6
R V TOP SHADING
VR7
G H SHADING (SAW)
VR8
G V SHADING (SAW)
VR9
G H TOP SHADING
VR10
G V TOP SHADING
VR11
B H SHADING (SAW)
VR12
B V SHADING (SAW)
VR13
B H TOP SHADING
VR14
B V TOP SHADING
4
5
6
7

Note: The value indicated in the schematic diagram should be read as follows:

□ □ □

Multiplier (0 - 5)

2nd. Significant Digit (0 - 9)

1st. Significant Digit (1 - 9)

<Example>

For Resistor:

330 → 33×10^0 = 33 Ω

561 → 56×10^1 = 560 Ω

123 → 12×10^3 = 12k Ω

0R00 = 0 Ω

For Capacitor:

820 → 82×10^0 = 82 pF

102 → 10×10^2 = 1000 pF = 0.001 µF

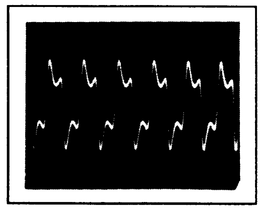
104 → 10×10^4 = 100000 pF = 0.1 µF

The suffix attached to capacitance indicates a type of capacitor.

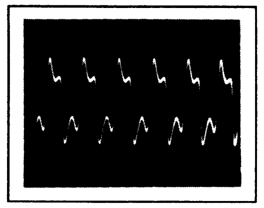
SCHEMATIC DIAGRAM OF DIGITAL PROC

DIGITAL PROCESS BOARD

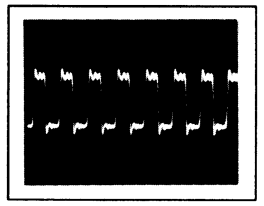
1. 20nsec/DIV 2V/DIV



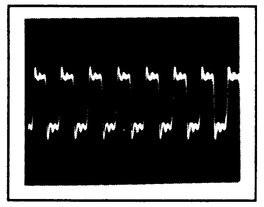
2. 20nsec/DIV 2V/DIV



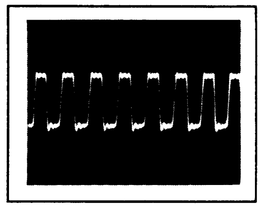
3. 50nsec/DIV 2V/DIV



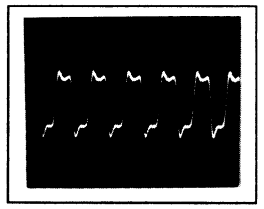
4. 50nsec/DIV 2V/DIV



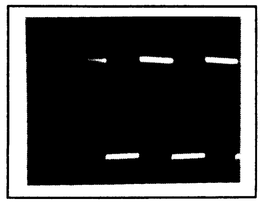
5. 50nsec/DIV 2V/DIV



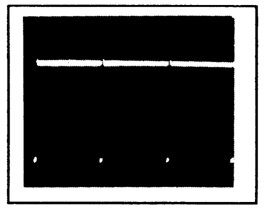
6. 20nsec/DIV 2V/DIV



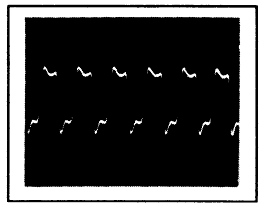
7. 10msec/DIV 1V/DIV



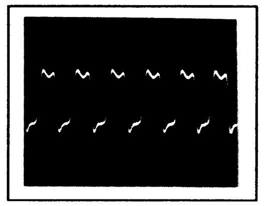
8. 5msec/DIV 1V/DIV



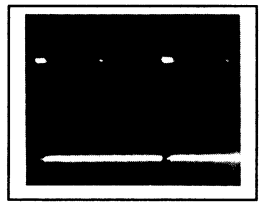
9. 20nsec/DIV 2V/DIV



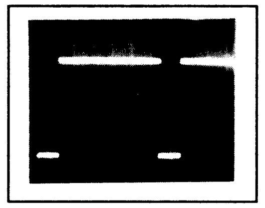
10. 20nsec/DIV 2V/DIV



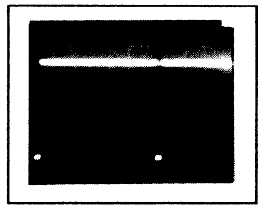
11. 10μsec/DIV 1V/DIV



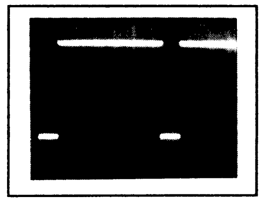
12. 10μsec/DIV 1V/DIV

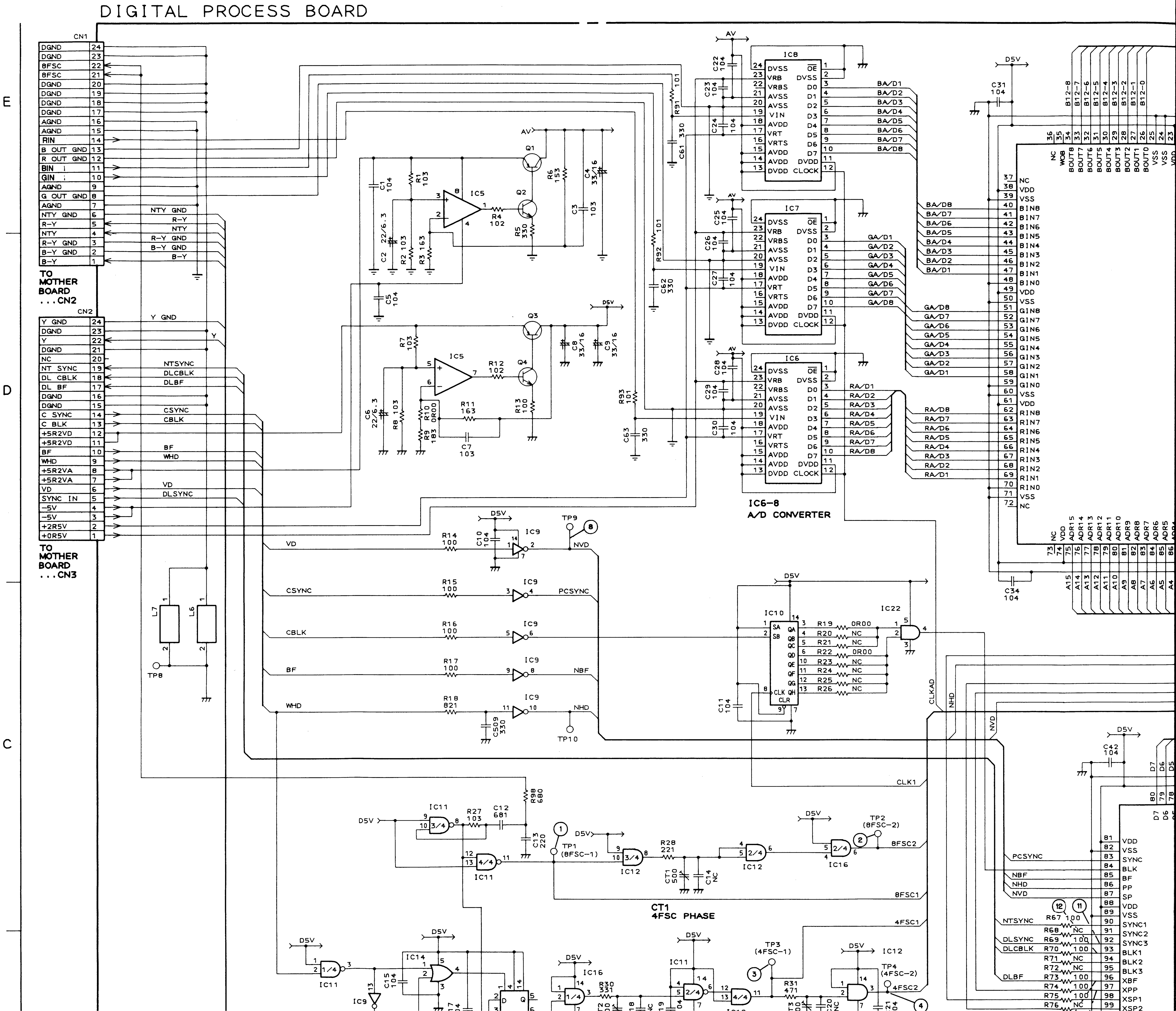


13. 10μsec/DIV 1V/DIV

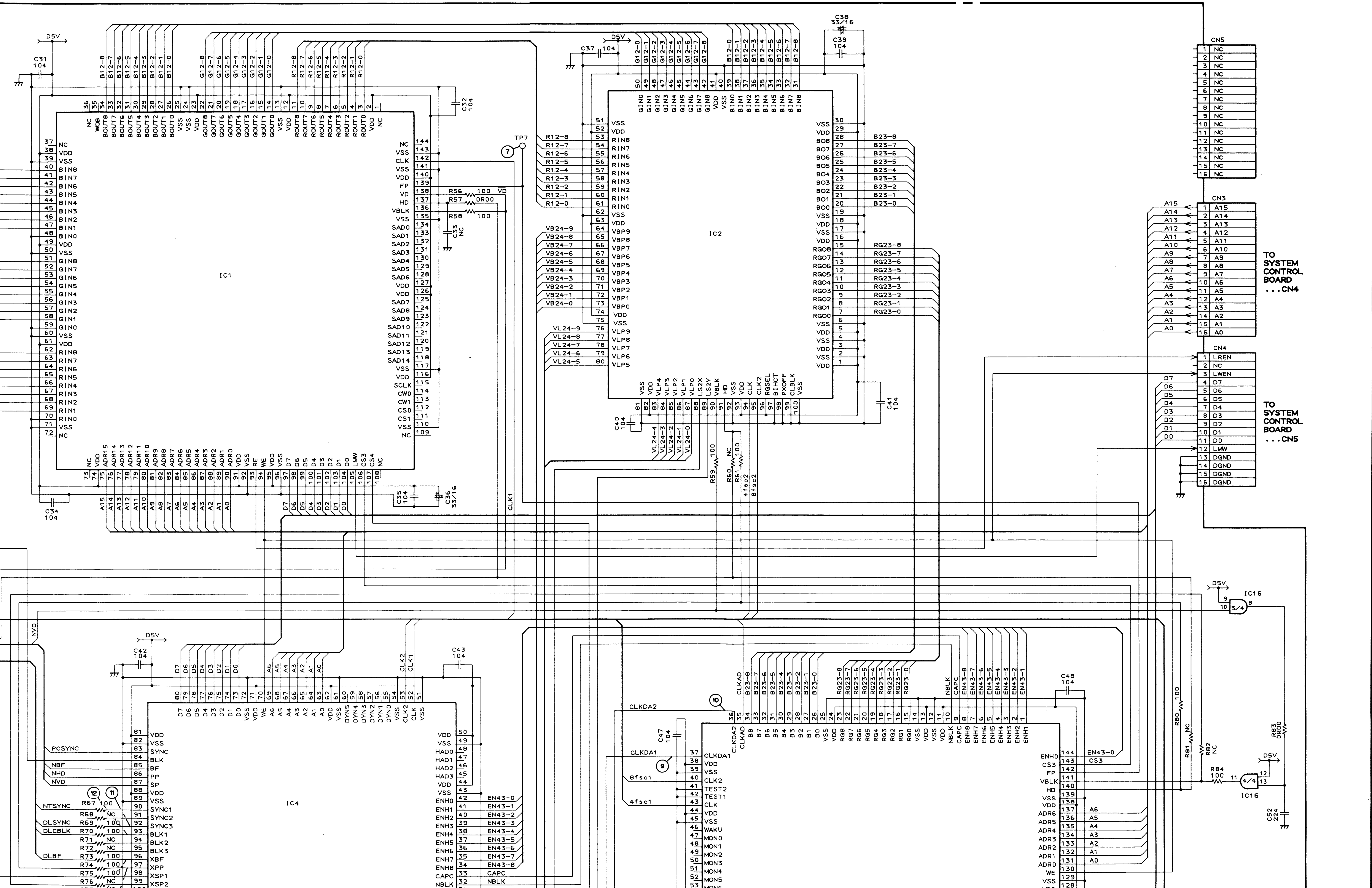


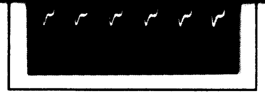
14. 10μsec/DIV 1V/DIV

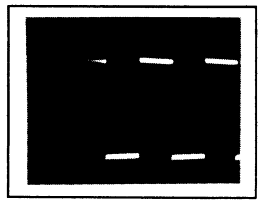




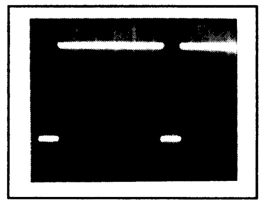
OF DIGITAL PROCESS BOARD (WV-E550E)


IC1
IC2
IC4
IC16
CN5
CN3
CN4
TO SYSTEM CONTROL BOARD ...CN4
TO SYSTEM CONTROL BOARD ...CN5
D5V
TP7
C31 104
C32 104
C33 NC
C34 104
C35 104
C36 33/16
C37 104
C38 33/16
C39 104
C40 104
C41 104
C42 104
C43 104
C47 104
C48 104
C52 224
R56 100
R57 0R00
R58 100
R59 100
R60 NC
R61 100
R67 100
R68 NC
R69 100
R70 100
R71 NC
R72 NC
R73 100
R74 100
R75 100
R76 NC
R80 100
R81 NC
R82 NC
R83 0R00
R84 100
CLK1
CLK2
CLKDA1
CLKDA2
CLKAD
4fsc1
8fsc1
4fsc2
8fsc2
PCSYNC
NBF
NHD
NVD
NTSYNC
DLSYNC
DLCBLK
DLBF
LREN
LWEN
LMW
DGND
A15 A14 A13 A12 A11 A10 A9 A8 A7 A6 A5 A4 A3 A2 A1 A0
D7 D6 D5 D4 D3 D2 D1 D0
B12-8 B12-7 B12-6 B12-5 B12-4 B12-3 B12-2 B12-1 B12-0
G12-8 G12-7 G12-6 G12-5 G12-4 G12-3 G12-2 G12-1 G12-0
R12-8 R12-7 R12-6 R12-5 R12-4 R12-3 R12-2 R12-1 R12-0
B23-8 B23-7 B23-6 B23-5 B23-4 B23-3 B23-2 B23-1 B23-0
RG23-8 RG23-7 RG23-6 RG23-5 RG23-4 RG23-3 RG23-2 RG23-1 RG23-0
VB24-9 VB24-8 VB24-7 VB24-6 VB24-5 VB24-4 VB24-3 VB24-2 VB24-1 VB24-0
VL24-9 VL24-8 VL24-7 VL24-6 VL24-5 VL24-4 VL24-3 VL24-2 VL24-1 VL24-0
EN43-0 EN43-1 EN43-2 EN43-3 EN43-4 EN43-5 EN43-6 EN43-7 EN43-8
CAPC
NBLK
CS3
3/4
4/4
⑦ ⑨ ⑩ ⑪ ⑫





7. 10msec/DIV 1V/DIV



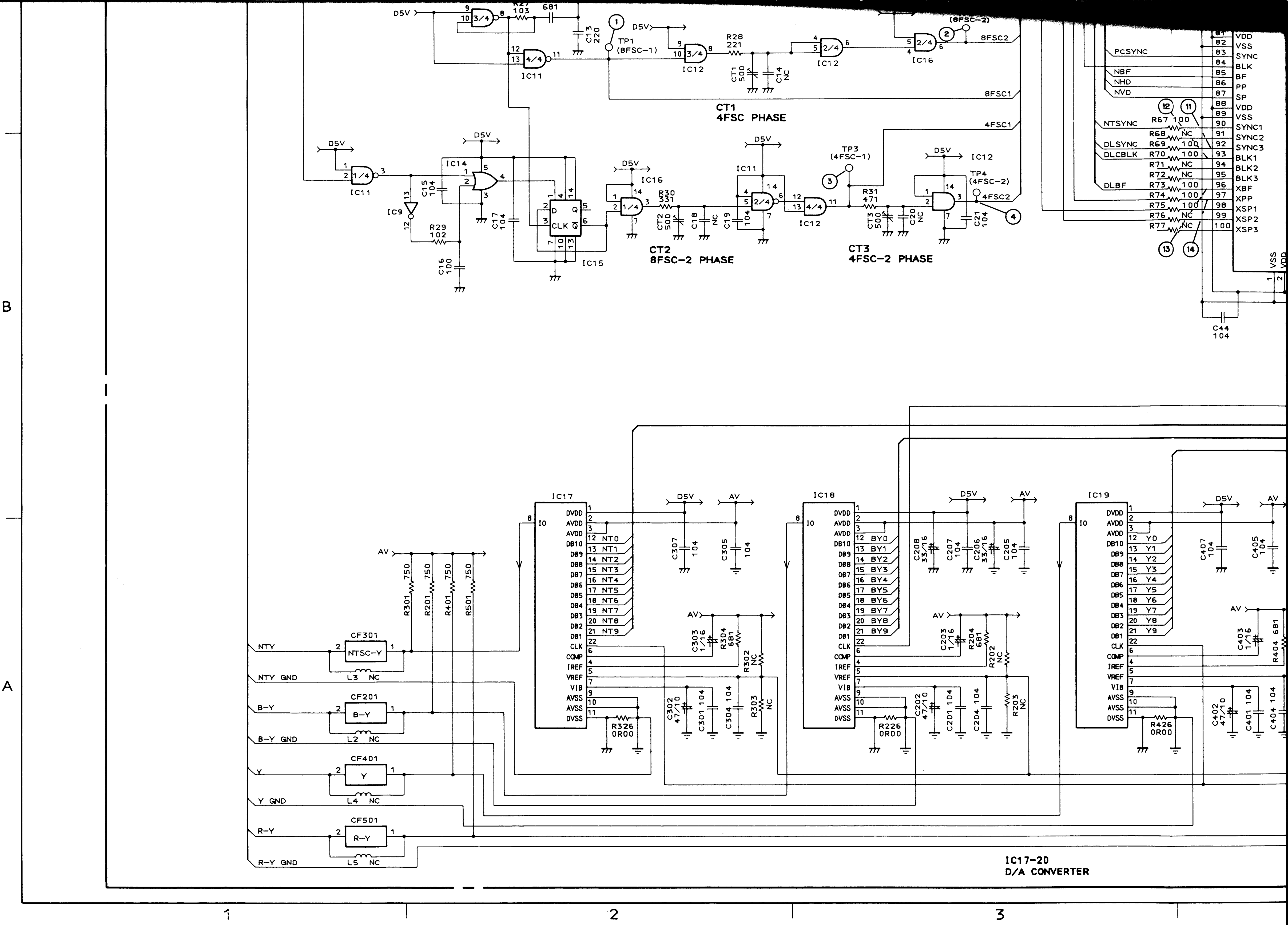
14. 10μsec/DIV 1V/DIV

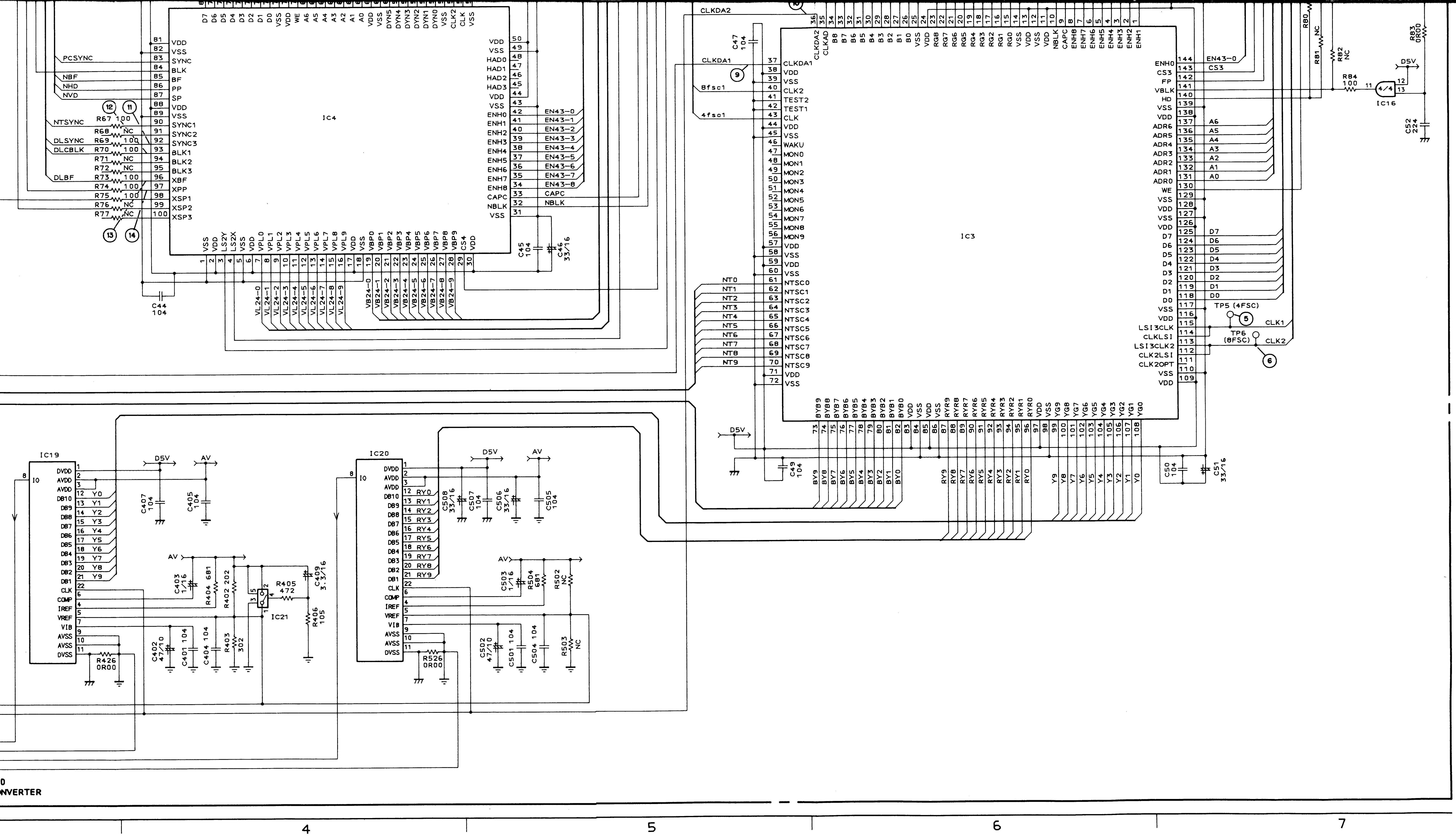
< Index> DIGITAL PROCESS BOARD

IC1	D4
IC2	D5
IC3	B6
IC4	C4
IC5	D2, E2
IC6	D3
IC7	D3
IC8	E3
IC9	C2, D2
IC10	C3
IC11	B1, B2, C2
IC12	B3, C2, C3
IC14	B2
IC15	B2
IC16	B2, C3, C7
IC17	A2
IC18	A3
IC19	A3
IC20	A4
IC21	A4
IC22	C3
Q1	E2
Q2	E2
Q3	D2
Q4	D2

DIGITAL PROCESS BOARD

	IC10	IC11	IC15	IC16
Pin 1	4.9	4.9	4.9	4.9
2	3.8	0.8	2.4	2.4
3	3.8	4.2	2.3	2.4
4	3.8	4.9	4.9	2.2
5	3.8	2.4	2.4	4.9
6	3.8	0.2	2.4	2.2
7	0	0	0	0
8	2.2	2.3	4.9	4.7
9	4.9	4.9	4.9	4.9
10	3.8	2.3	0	0.2
11	3.8	2.5	0.8	0.2
12	3.8	2.3	0.8	0.2
13	3.8	4.9	0	4.7
14	4.9	4.9	4.9	0.2


B
A
1
2
3
D5V
IC11
IC12
IC14
IC15
IC16
IC9
TP1 (8FSC-1)
TP3 (4FSC-1)
TP4 (4FSC-2)
(8FSC-2)
8FSC2
8FSC1
4FSC1
4FSC2
CT1 4FSC PHASE
CT2 8FSC-2 PHASE
CT3 4FSC-2 PHASE
R27 103
R28 221
R29 102
R30 331
R31 471
C13 220
C14 NC
C15 104
C16 100
C17 104
C18 NC
C19 104
C20 NC
C21 104
CT1 500
CT2 500
CT3 500
PCSYNC
NBF
NHD
NVD
NTSYNC
DLSYNC
DLCBLK
DLBF
R67 100
R68 NC
R69 100
R70 100
R71 NC
R72 NC
R73 100
R74 100
R75 100
R76 NC
R77 NC
VDD
VSS
SYNC
BLK
BF
PP
SP
SYNC1
SYNC2
SYNC3
BLK1
BLK2
BLK3
XBF
XPP
XSP1
XSP2
XSP3
C44 104
IC17
IC18
IC19
AV
NTY
NTY GND
B-Y
B-Y GND
Y
Y GND
R-Y
R-Y GND
CF301 NTSC-Y
CF201 B-Y
CF401 Y
CF501 R-Y
L3 NC
L2 NC
L4 NC
L5 NC
R301 750
R201 750
R401 750
R501 750
DVDD
AVDD
DB10
DB9
DB8
DB7
DB6
DB5
DB4
DB3
DB2
DB1
CLK
COMP
IREF
VREF
VIB
AVSS
DVSS
IO
NT0
NT1
NT2
NT3
NT4
NT5
NT6
NT7
NT8
NT9
BY0
BY1
BY2
BY3
BY4
BY5
BY6
BY7
BY8
BY9
Y0
Y1
Y2
Y3
Y4
Y5
Y6
Y7
Y8
Y9
C307 104
C305 104
C303 1/16
R304 681
R302 NC
C302 47/10
C301 104
C304 104
R303 NC
R326 0R00
C208 33/16
C207 104
C206 33/16
C205 104
C203 1/16
R204 681
R202 NC
C202 47/10
C201 104
C204 104
R203 NC
R226 0R00
C407 104
C405 104
C403 1/16
R404 681
C402 47/10
C401 104
C404 104
R426 0R00
IC17-20 D/A CONVERTER


IC4
IC3
IC19
IC20
IC21
IC16
PCSYNC
NBF
NHD
NVD
NTSYNC
DLSYNC
DLCBLK
DLBF
R67 100
R68 NC
R69 100
R70 100
R71 NC
R72 NC
R73 100
R74 100
R75 100
R76 NC
R77 NC
C44 104
C45 104
C46 33/16
C47 104
C49 104
C50 104
C51 33/16
C52 224
R80
R81
R82 NC
R83 0R00
R84 100
CLKDA2
CLKDA1
8fsc1
4fsc1
EN43-0
CS3
TP5 (4FSC)
TP6 (8FSC)
CLK1
CLK2
D5V
AV
C407 104
C405 104
C403 1/16
R404 681
R402 202
R405 472
C409 3.3/16
R406 105
C402 47/10
C401 104
C404 104
R403 302
R426 0R00
C508 33/16
C507 104
C506 33/16
C505 104
C503 1/16
R504 681
R502 NC
C502 47/10
C501 104
C504 104
R503 NC
R526 0R00
CONVERTER
4
5
6
7

Note: **The value indicated in the schematic diagram should be read as follows:**

□ □ □

Multiplier (0 - 5)

2nd. Significant Digit (0 - 9)

1st. Significant Digit (1 - 9)

<Example>

For Resistor:

330 → 33×10^0 = 33 Ω

561 → 56×10^1 = 560 Ω

123 → 12×10^3 = 12k Ω

0R00 = 0 Ω

For Capacitor:

820 → 82×10^0 = 82 pF

102 → 10×10^2 = 1000 pF = 0.001 µF

104 → 10×10^4 = 100000 pF = 0.1 µF

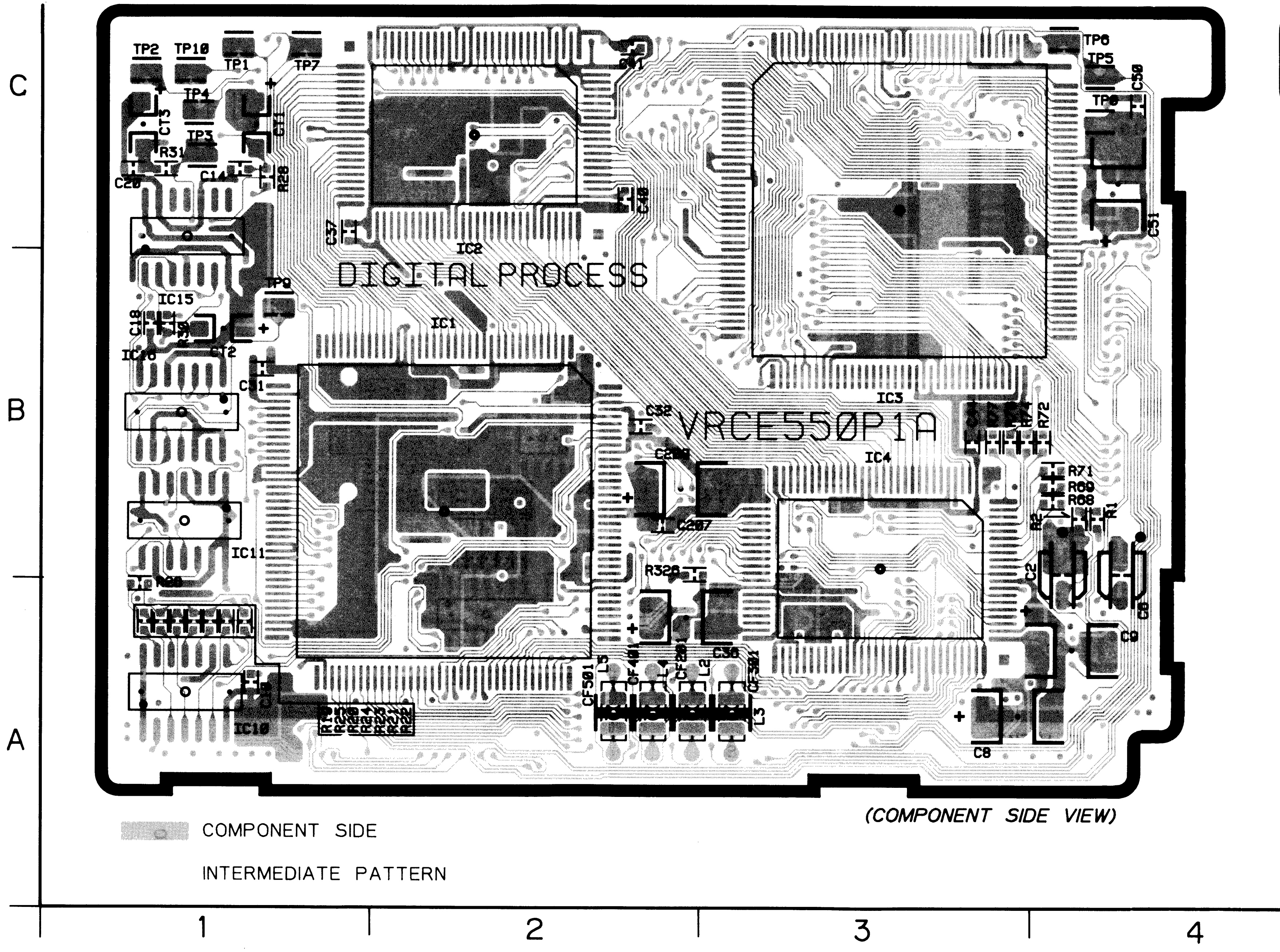
The suffix attached to capacitance indicates a type of capacitor.

CONDUCTOR VIEW OF DIGITAL PROCESS BOARD (WV-E550E)

< Index>
DIGITAL PROCESS BOARD

IC1	B2
IC2	C2
IC3	C3
IC4	B3
IC5	A5
IC6	A7
IC7	B7
IC8	C7
IC9	A7
IC10	A1
IC11	B1
IC12	C8
IC14	B8
IC15	C1
IC16	B1
IC17	B6
IC18	B6
IC19	C5
IC20	C6
IC21	C5
IC22	B7
Q1	B5
Q2	B5
Q3	A5
Q4	A5

DIGITAL PROCESS BOARD

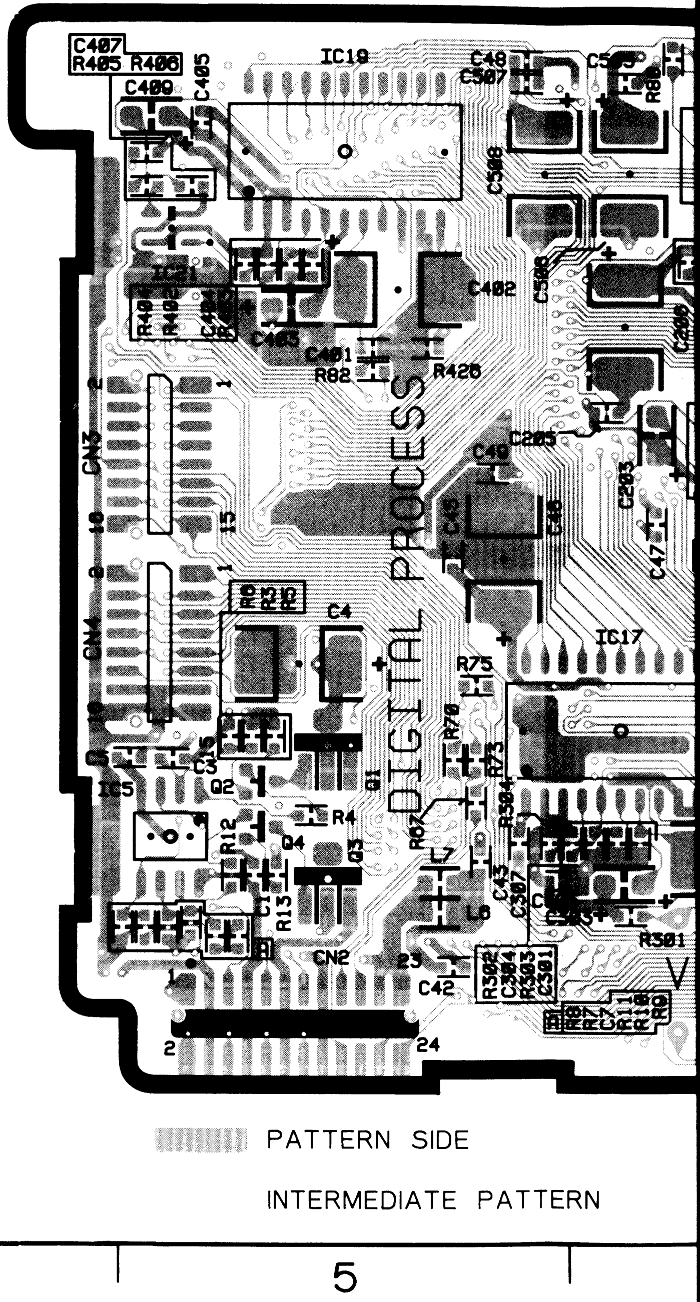

C
B
A
1
2
3
4
DIGITAL PROCESS
VRCE550P1A
IC1
IC2
IC3
IC4
IC10
IC11
IC15
IC16
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TP9
TP10

▨ COMPONENT SIDE

INTERMEDIATE PATTERN

(COMPONENT SIDE VIEW)

DIGITAL PROCESS BOAR

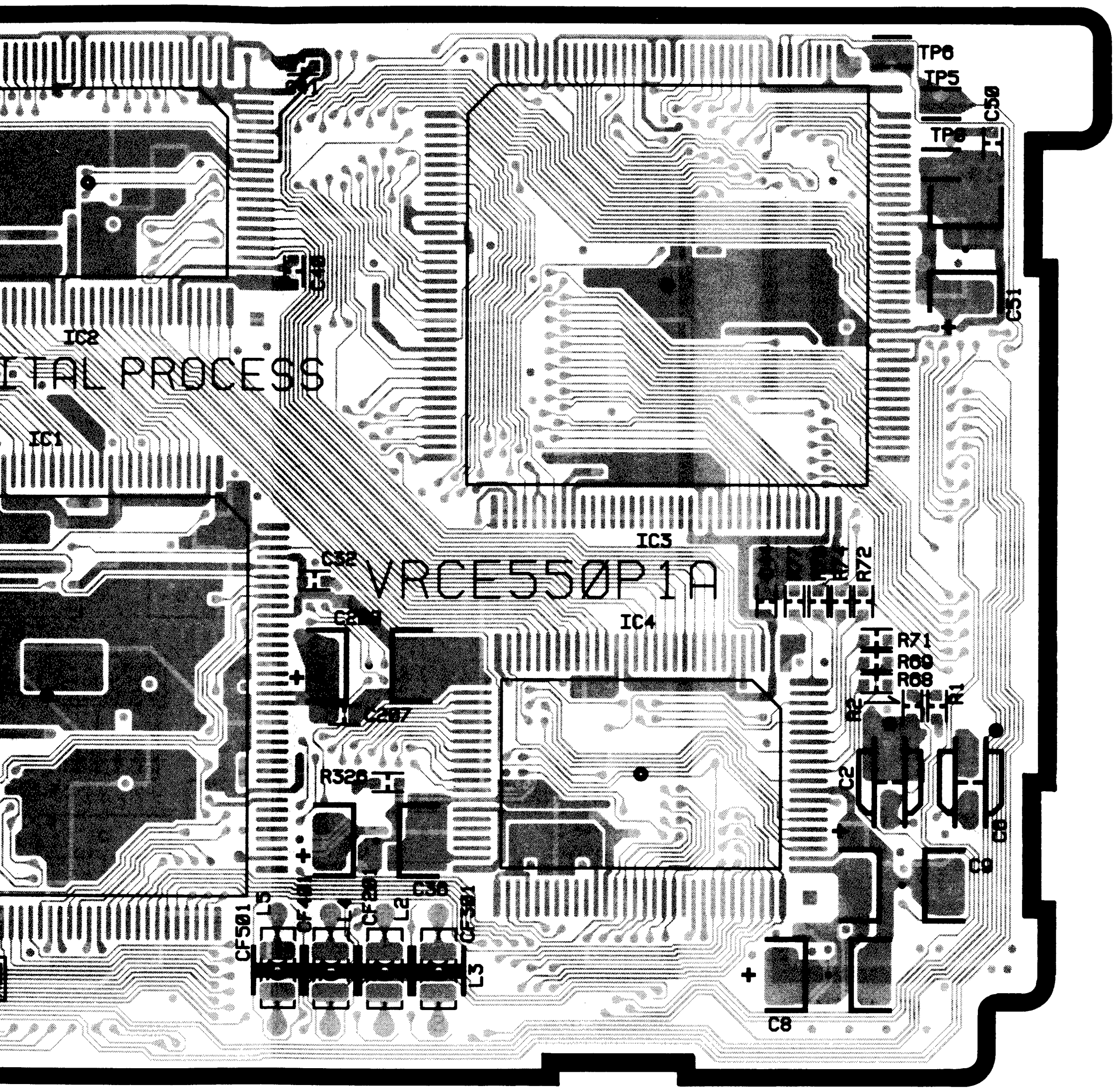

5
DIGITAL PROCESS
IC5
IC17
IC19
CN2
CN3
CN4
Q1
Q2
Q3
Q4

▨ PATTERN SIDE

INTERMEDIATE PATTERN

CONDUCTOR VIEW OF DIGITAL PROCESS BOARD (WV-E550E)

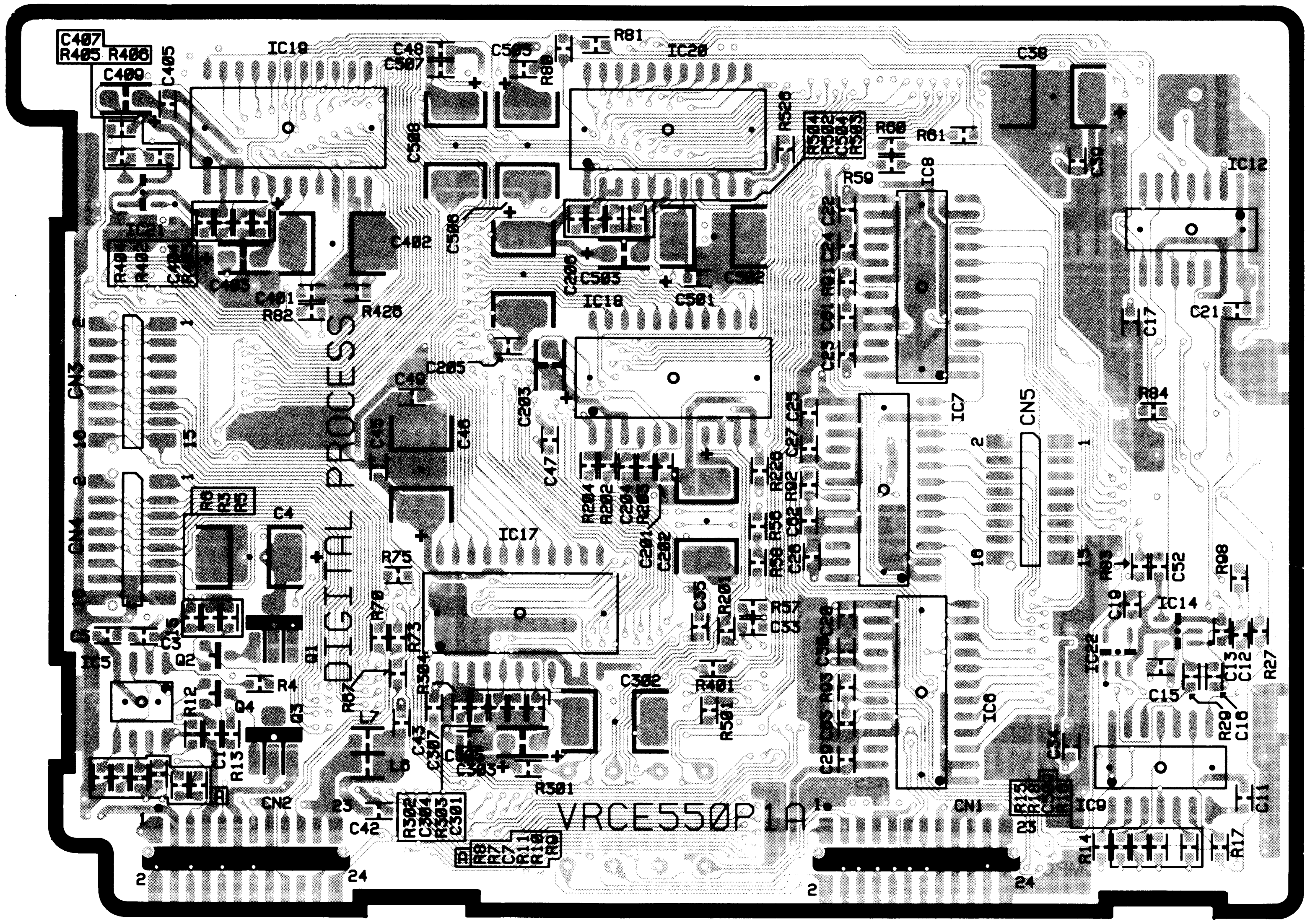
ESS BOARD


TP6
TP5
TP8
C50
C51
C48
IC2
ITAL PROCESS
IC1
IC3
IC4
VRCE550P1A
C32
C208
C207
R72
R71
R69
R68
R1
R2
C2
C3
C9
C8
R320
C36
C301
CF501
CF401
L3
L5

(COMPONENT SIDE VIEW)

ERN

DIGITAL PROCESS BOARD


C407
R405
R406
C400
C405
IC19
C49
C507
C505
R80
R81
IC20
C506
R520
R60
R61
C38
IC12
C402
R420
C401
R82
C405
IC21
C503
C501
IC18
C200
C502
R59
IC8
C21
C17
CN3
CN4
C205
C49
C46
C203
C47
IC7
CN5
R84
C4
R75
R70
R73
IC17
R204
R202
C204
C201
C202
C35
R200
R57
C33
R58
R56
C26
C27
C25
R83
C52
R08
C10
IC14
IC22
C13
C12
R27
C15
R20
C16
IC5
Q2
Q1
R4
Q4
Q3
R12
R13
R67
R504
C43
C507
C503
C302
R401
R501
L6
CN2
C42
R302
C304
R303
C301
R8
R7
C7
R11
R10
R301
VRCE550P1A
CN1
IC6
C34
IC9
R14
R17
C11
DIGITAL PROCESS
1
2
10
15
18
23
24

(PATTERN SIDE VIEW)

▨ PATTERN SIDE

INTERMEDIATE PATTERN

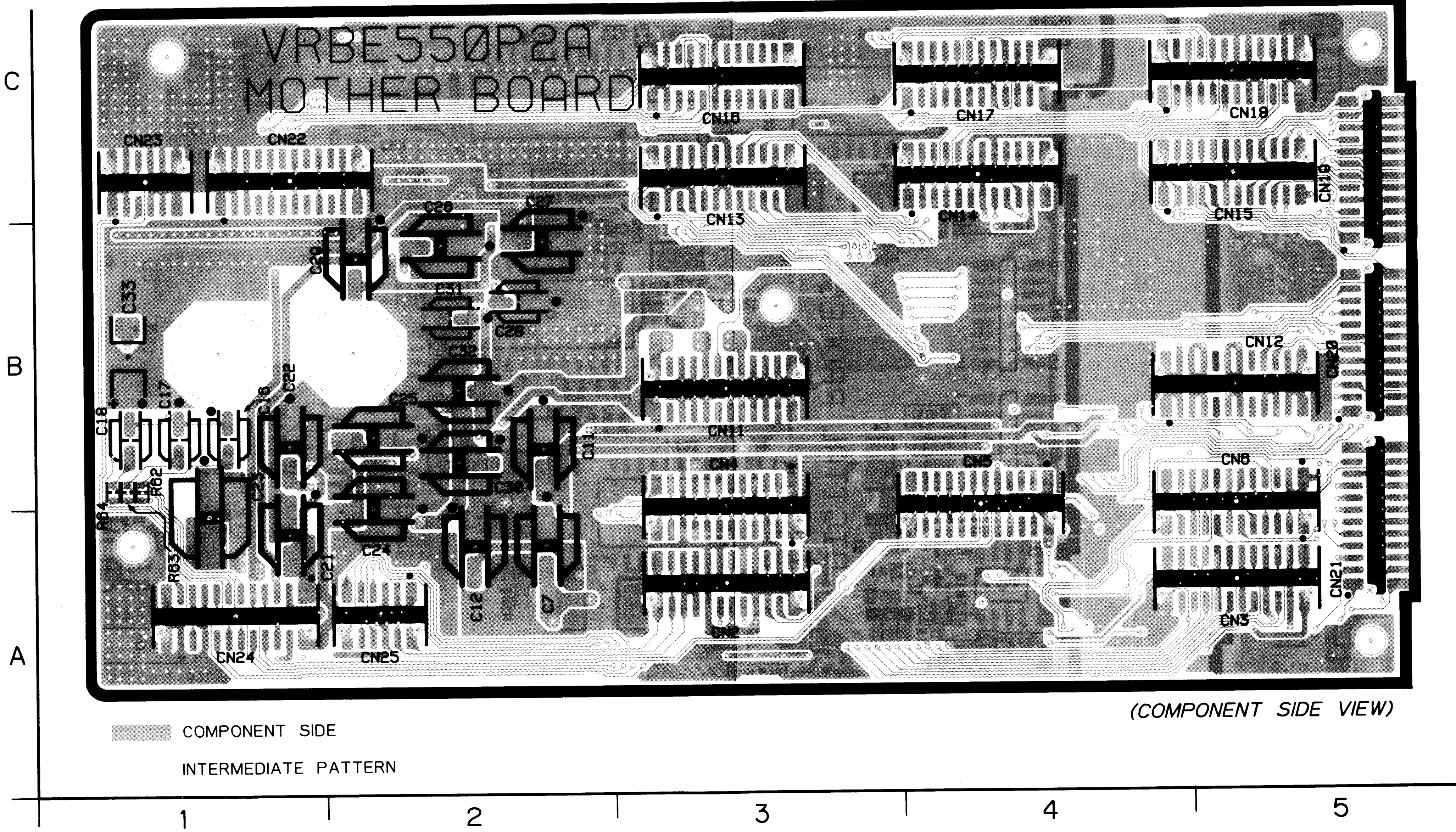
2	3	4	5	6	7

CONDUCTOR VIEW OF MOTHER BOARD (WV-E550E)

< Index>
MOTHER BOARD

IC1	A6
IC2	A7
IC3	B6
IC4	A6
IC5	A7
IC6	A7
IC7	B7
IC8	B9
IC9	A9
IC10	A9
IC11	A9
Q1	B6
Q2	B6
Q3	B6
Q4	B6
Q5	B6
Q6	B6
Q7	A6
Q8	A6
Q9	A6
Q10	A6
Q11	A6
Q12	A6
Q16	A10
Q17	A10
Q18	B10
Q19	B10
Q20	B9
Q21	B9
Q22	B9
Q23	B8
Q24	B9
Q25	B9
Q26	B8
Q27	B8
Q28	B9
Q29	B9
D1	B6
D2	A7
D6	B10

MOTHER BOARD

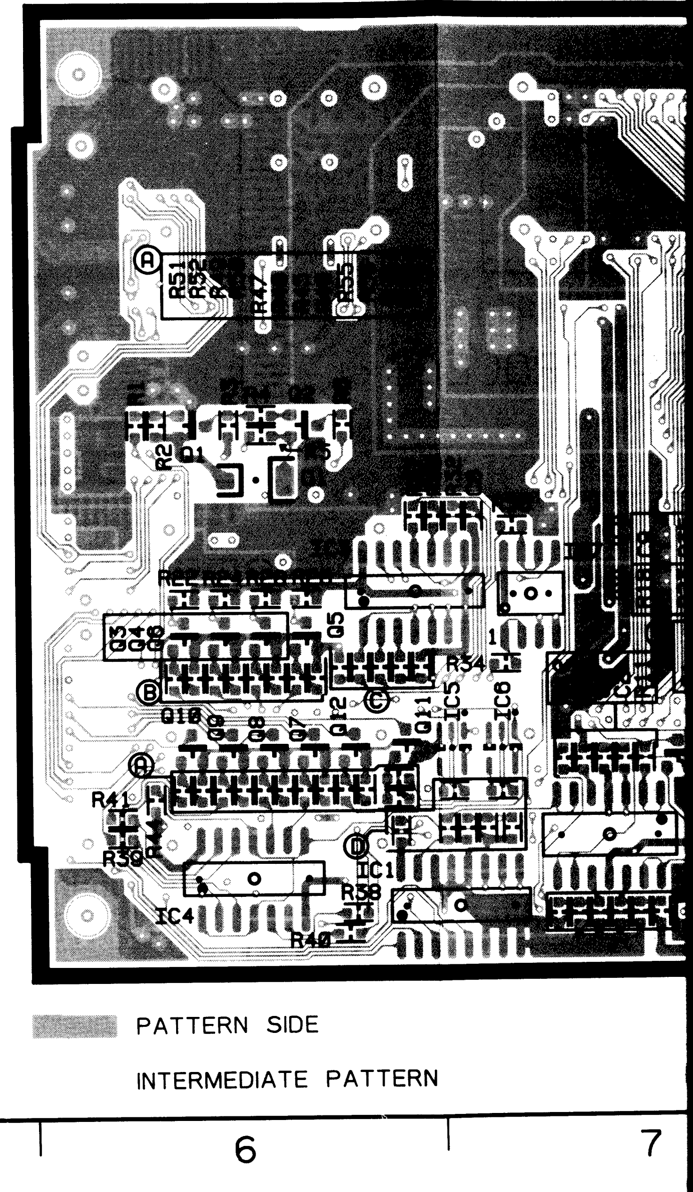

C
B
A
VRBE550P2A
MOTHER BOARD
CN23
CN22
CN16
CN17
CN18
CN13
CN14
CN15
CN19
CN12
CN20
CN11
CN4
CN5
CN6
CN21
CN2
CN3
CN24
CN25
C26
C27
C29
C31
C28
C32
C33
C25
C22
C16
C17
C18
C30
C11
C24
C21
C12
C7
R62
R64
R63
1
2
3
4
5

▨ COMPONENT SIDE

INTERMEDIATE PATTERN

(COMPONENT SIDE VIEW)

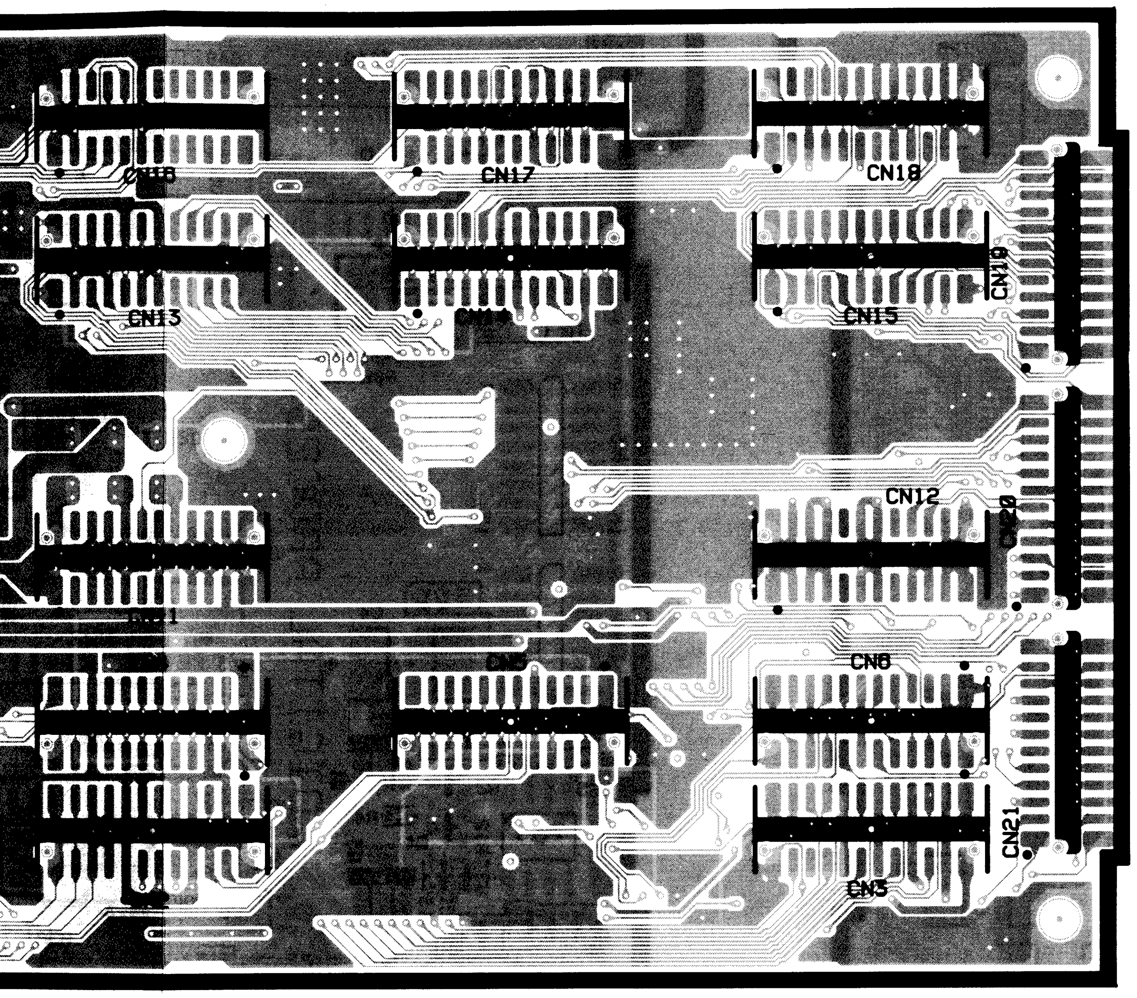
MOTHER BOARD


Ⓐ
R51
R52
R47
R2
Q1
Q3
Q4
Q6
Q5
R34
Ⓑ
Ⓒ
IC5
IC8
Q10
Q9
Q8
Q7
Q12
Q11
Ⓐ
R41
R44
R39
Ⓓ
IC1
R58
IC4
R40
6
7

▨ PATTERN SIDE

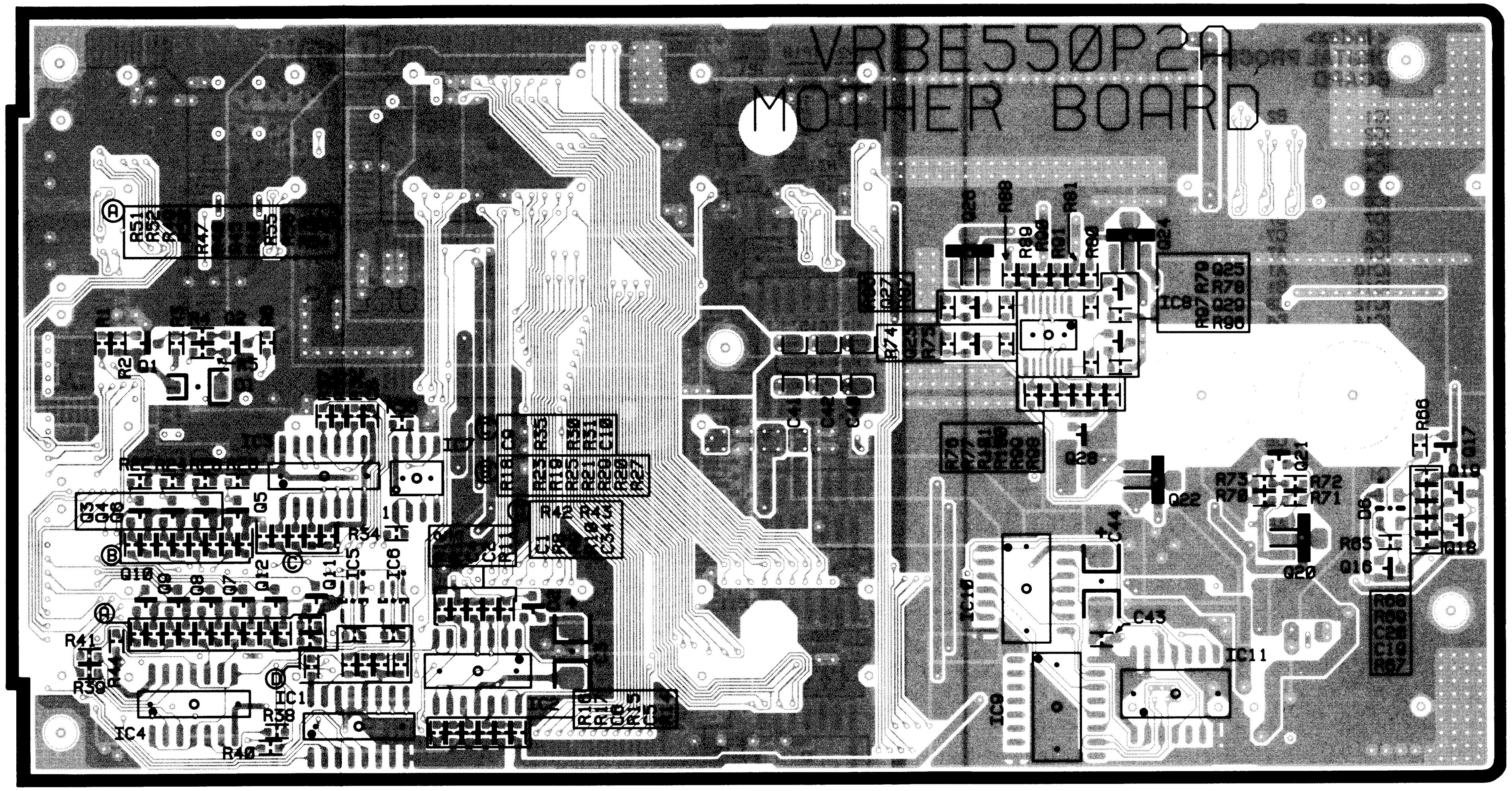
INTERMEDIATE PATTERN

CONDUCTOR VIEW OF MOTHER BOARD (WV-E550E)


CN16
CN17
CN18
CN13
CN15
CN19
CN12
CN20
CN11
CN6
CN21
CN5

(COMPONENT SIDE VIEW)

MOTHER BOARD


VRBE550P2A
MOTHER BOARD
R51
R2
Q1
IC8
R74
Q28
Q22
R73
R72
R71
R70
R65
Q16
Q20
C44
C43
IC10
IC9
IC11
R66
Q17
Q18
Q10
Q12
Q11
IC5
IC6
IC7
R34
R41
R39
IC4
IC1
R38
R40
R42

(PATTERN SIDE VIEW)

▨ PATTERN SIDE

INTERMEDIATE PATTERN

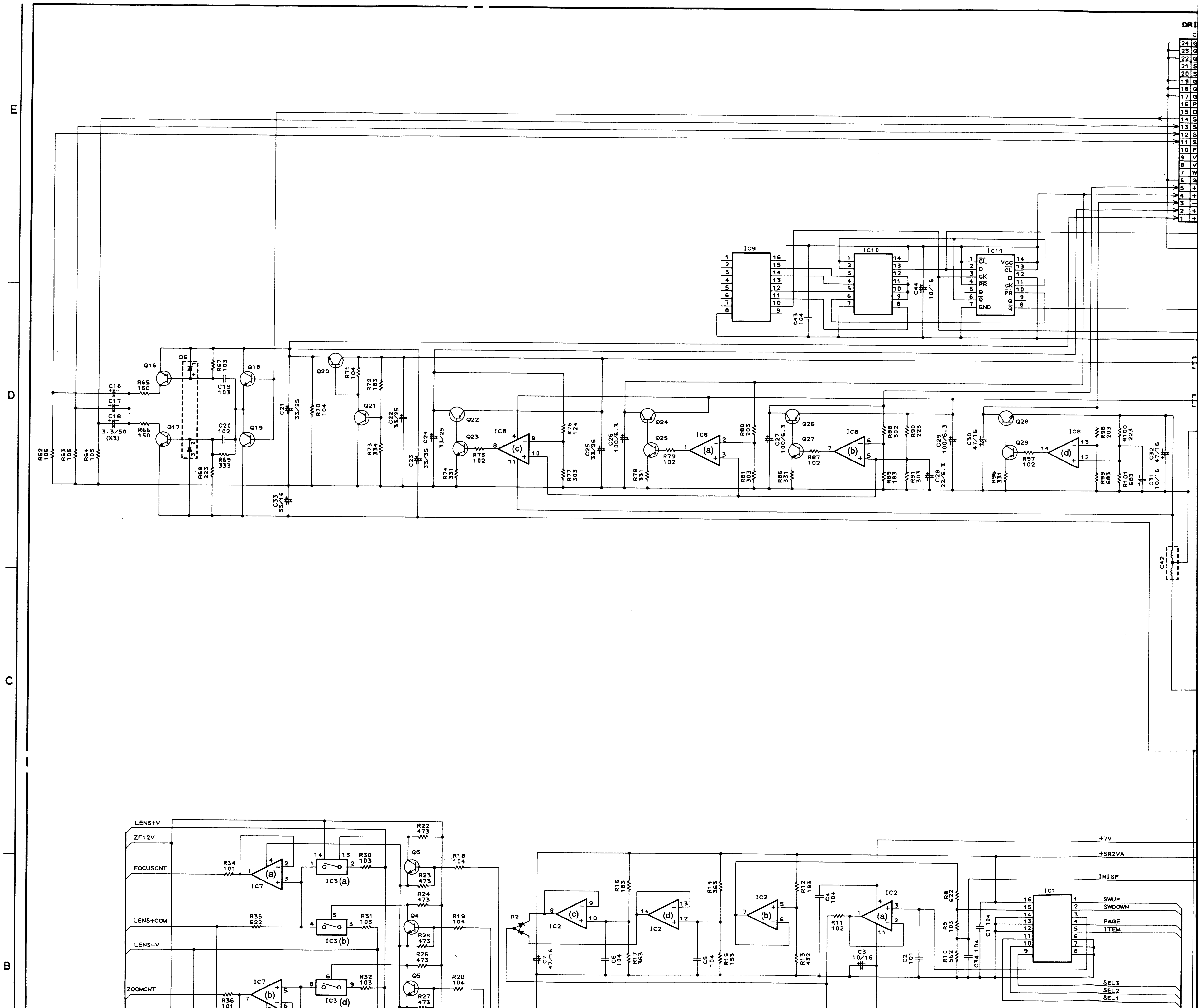
3 4 5 6 7 8 9 10

SCHEMATIC DIAGRAM OF MOTHER BO

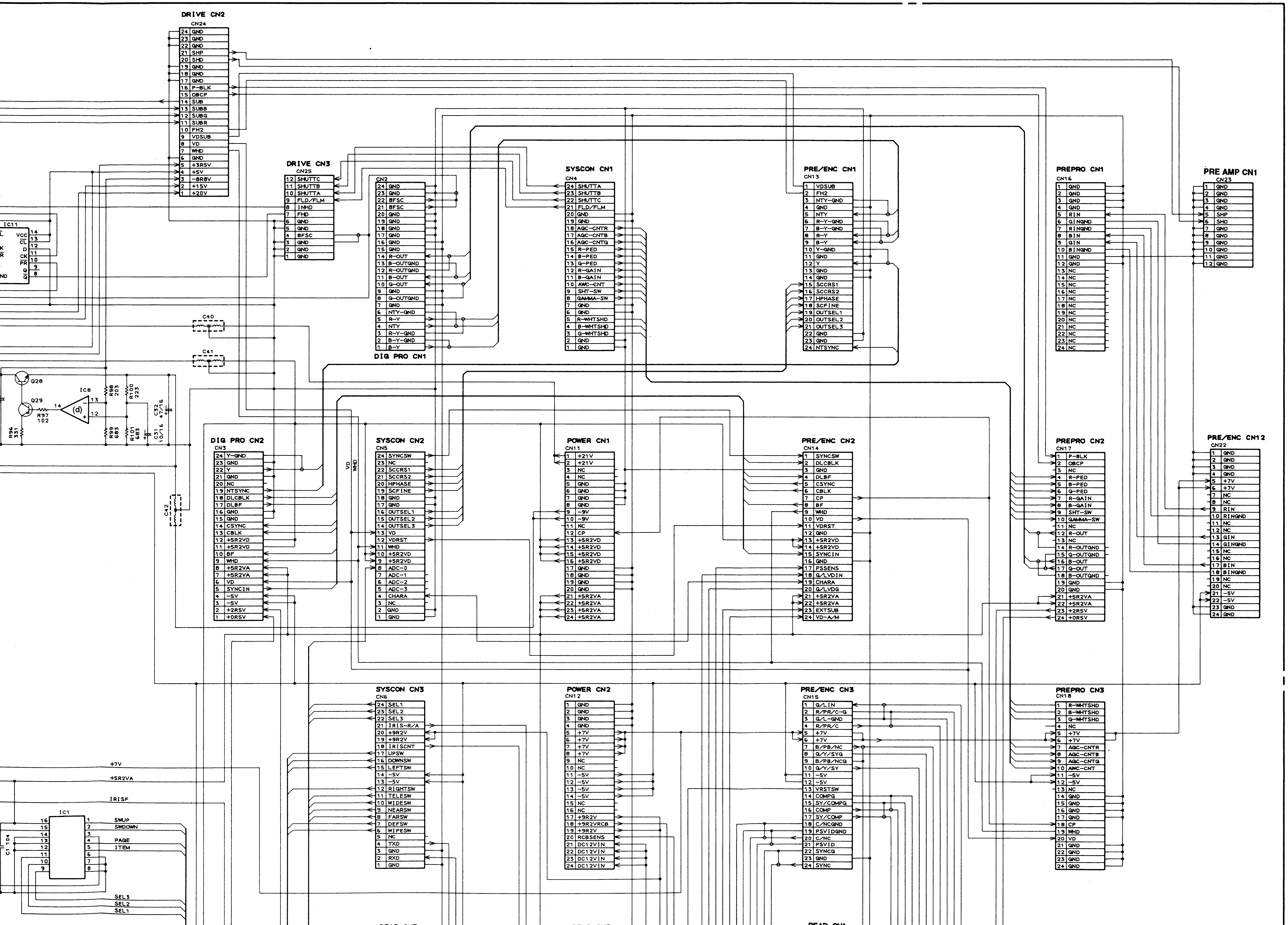
< Index>
MOTHER BOARD

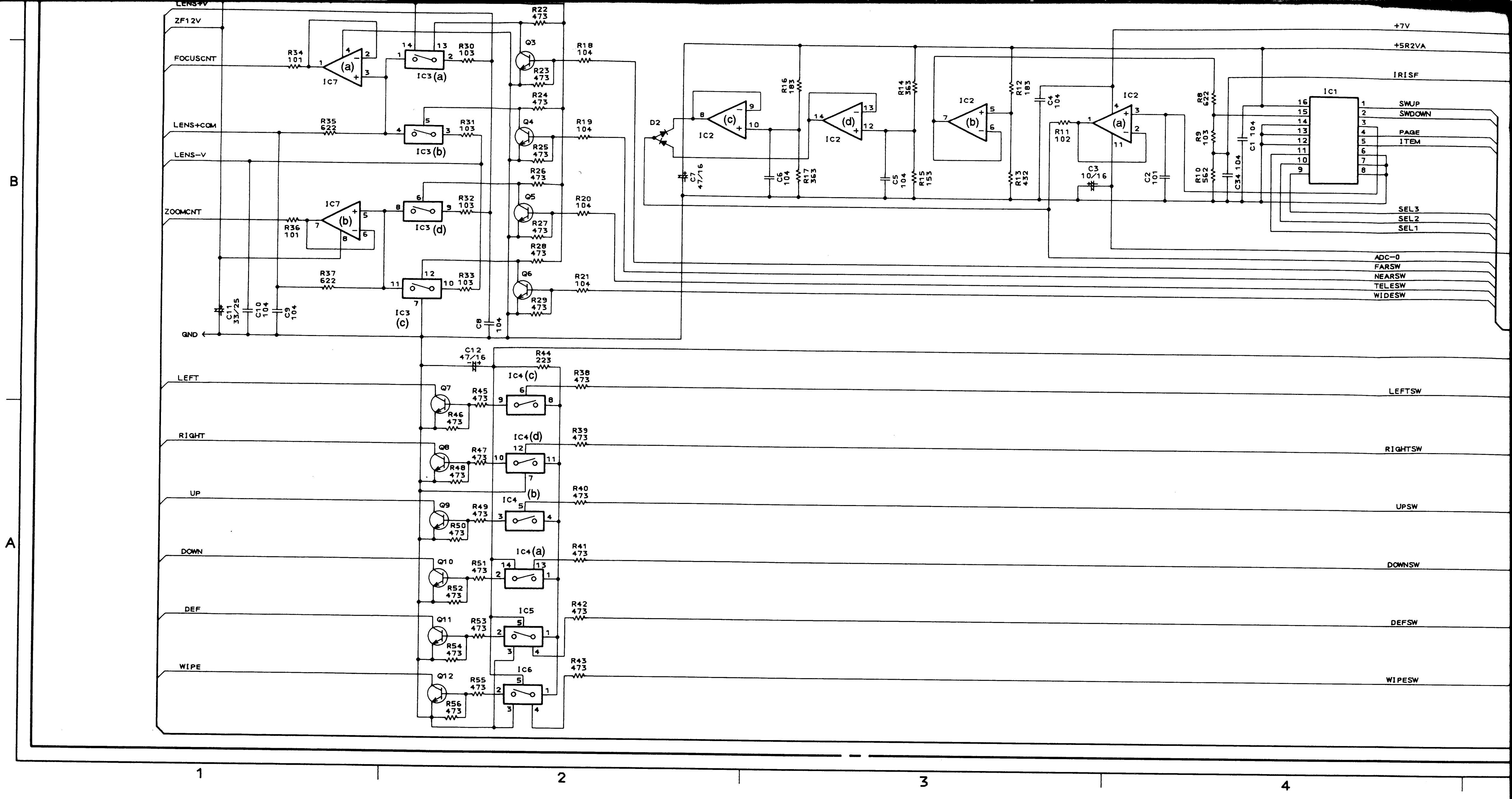
IC1	B4
IC2	B2, B3, B4
IC3	B2
IC4	A2, B2
IC5	A2
IC6	A2
IC7	B1
IC8	D2, D3, D4
IC9	E3
IC10	E3
IC11	E4
Q1	A8
Q2	A8
Q3	B2
Q4	B2
Q5	B2
Q6	B2
Q7	B2
Q8	A2
Q9	A2
Q10	A2
Q11	A2
Q12	A2
Q16	D1
Q17	D1
Q18	D1
Q19	D1
Q20	D2
Q21	D2
Q22	D2
Q23	D2
Q24	D3
Q25	D3
Q26	D3
Q27	D3
Q28	D4
Q29	D4
D1	B8
D2	B2
D6	D1

MOTHER BOARD


E
D
C
B
DRI
IC9
IC10
IC11
C43 104
C44 10/16
Q16
Q17
Q18
Q19
Q20
Q21
Q22
Q23
Q24
Q25
Q26
Q27
Q28
Q29
D6
IC8
(a)
(b)
(c)
(d)
R62 105
R63 105
R64 105
R65 150
R66 150
C16
C17
C18
3.3/50 (X3)
R67 103
C19 103
C20 102
R68 223
R69 333
C33 33/16
C21 33/25
R70 104
R71 104
R72 183
R73 334
C22 33/25
C23 33/35
C24 33/25
R74 331
R75 102
R76 124
R77 303
C25 33/25
C26 100/6.3
R78 331
R79 102
R80 203
R81 303
C27 100/6.3
R86 331
R87 102
R88 302
R89 183
R90 223
R91 303
C28 22/6.3
C29 100/6.3
C30 47/16
R96 331
R97 102
R98 203
R99 683
R100 223
R101 683
C31 10/16
C32 47/16
C42
LENS+V
ZF12V
FOCUSCNT
LENS+COM
LENS-V
ZOOMCNT
IC7
IC3(a)
IC3(b)
IC3(d)
R34 101
R35 622
R36 101
R30 103
R31 103
R32 103
R22 473
R23 473
R24 473
R25 473
R26 473
R27 473
R18 104
R19 104
R20 104
Q3
Q4
Q5
D2
IC2
C7 47/16
C6 104
R16 183
R17 363
R14 363
C5 104
R15 153
R12 183
R13 432
C4 104
R11 102
C3 10/16
C2 101
R8 622
R9 103
R10 562
C1 104
C34 104
IC1
+7V
+5R2VA
IRISF
SWUP
SWDOWN
PAGE
ITEM
SEL3
SEL2
SEL1

M OF MOTHER BOARD (WV-E550E)

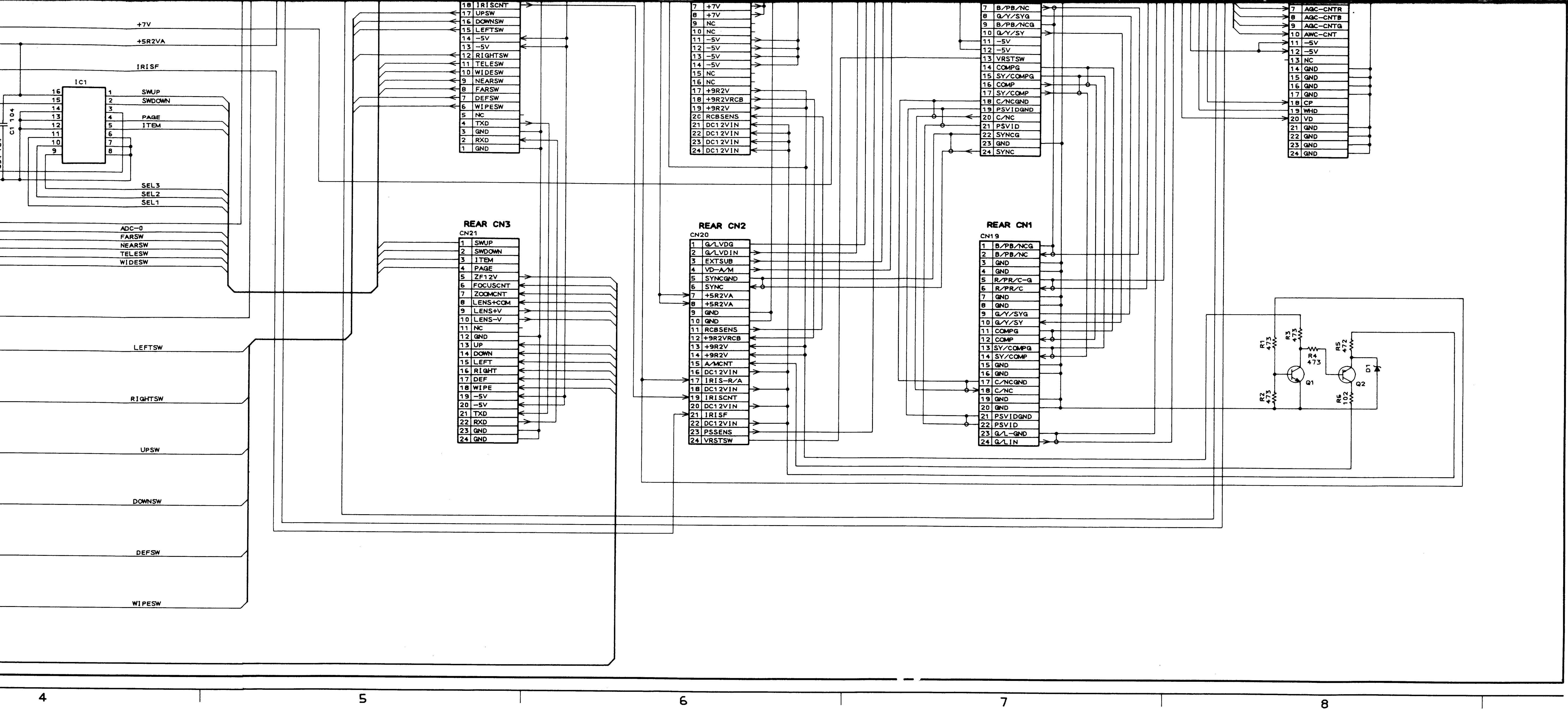

DRIVE CN2
CN24
24 GND
23 GND
22 GND
21 SHP
20 SHD
19 GND
18 GND
17 GND
16 P-BLK
15 OBCP
14 SUB
13 SUBB
12 SUBG
11 SUBR
10 FH2
9 VDSUB
8 VD
7 WHD
6 GND
5 +3R5V
4 +5V
3 -8R8V
2 +15V
1 +20V
DRIVE CN3
CN25
12 SHUTTC
11 SHUTTB
10 SHUTTA
9 FLD/FLM
8 INHD
7 FHD
6 GND
5 GND
4 8FSC
3 GND
2 GND
1 GND
CN2
24 GND
23 GND
22 8FSC
21 8FSC
20 GND
19 GND
18 GND
17 GND
16 GND
15 GND
14 R-OUT
13 B-OUTGND
12 R-OUTGND
11 B-OUT
10 G-OUT
9 GND
8 G-OUTGND
7 GND
6 NTY-GND
5 R-Y
4 NTY
3 R-Y-GND
2 B-Y-GND
1 B-Y
DIG PRO CN1
SYSCON CN1
CN4
24 SHUTTA
23 SHUTTB
22 SHUTTC
21 FLD/FLM
20 GND
19 GND
18 AGC-CNTR
17 AGC-CNTB
16 AGC-CNTG
15 R-PED
14 B-PED
13 G-PED
12 R-GAIN
11 B-GAIN
10 AWC-CNT
9 SHT-SW
8 GAMMA-SW
7 GND
6 GND
5 R-WHTSHD
4 B-WHTSHD
3 G-WHTSHD
2 GND
1 GND
PRE/ENC CN1
CN13
1 VDSUB
2 FH2
3 NTY-GND
4 GND
5 NTY
6 R-Y-GND
7 B-Y-GND
8 R-Y
9 B-Y
10 Y-GND
11 GND
12 Y
13 GND
14 GND
15 SCCRS1
16 SCCRS2
17 HPHASE
18 SCFINE
19 OUTSEL1
20 OUTSEL2
21 OUTSEL3
22 GND
23 GND
24 NTSYNC
PREPRO CN1
CN16
1 GND
2 GND
3 GND
4 GND
5 RIN
6 GINGND
7 RINGND
8 BIN
9 GIN
10 BINGND
11 GND
12 GND
13 NC
14 NC
15 NC
16 NC
17 NC
18 NC
19 NC
20 NC
21 NC
22 NC
23 NC
24 NC
PRE AMP CN1
CN23
1 GND
2 GND
3 GND
4 GND
5 SHP
6 SHD
7 GND
8 GND
9 GND
10 GND
11 GND
12 GND
IC11
VCC 14
CL 13
D 12
11
CK 10
PR
9
Q 8
ND
C40
C41
Q28
Q29
R97 102
R96 331
IC8
(d)
14
13
12
R98 203
R99 683
R100 223
R101 683
C32 47/16
C31 10/16
C42
DIG PRO CN2
CN3
24 Y-GND
23 GND
22 Y
21 GND
20 NC
19 NTSYNC
18 DLCBLK
17 DLBF
16 GND
15 GND
14 CSYNC
13 CBLK
12 +5R2VD
11 +5R2VD
10 BF
9 WHD
8 +5R2VA
7 +5R2VA
6 VD
5 SYNCIN
4 -5V
3 -5V
2 +2R5V
1 +0R5V
VD
WHD
SYSCON CN2
CN5
24 SYNCSW
23 NC
22 SCCRS1
21 SCCRS2
20 HPHASE
19 SCFINE
18 GND
17 GND
16 OUTSEL1
15 OUTSEL2
14 OUTSEL3
13 VD
12 VDRST
11 WHD
10 +5R2VD
9 +5R2VD
8 ADC-0
7 ADC-1
6 ADC-2
5 ADC-3
4 CHARA
3 NC
2 GND
1 GND
POWER CN1
CN11
1 +21V
2 +21V
3 NC
4 NC
5 GND
6 GND
7 GND
8 GND
9 -9V
10 -9V
11 NC
12 CP
13 +5R2VD
14 +5R2VD
15 +5R2VD
16 +5R2VD
17 GND
18 GND
19 GND
20 GND
21 +5R2VA
22 +5R2VA
23 +5R2VA
24 +5R2VA
PRE/ENC CN2
CN14
1 SYNCSW
2 DLCBLK
3 GND
4 DLBF
5 CSYNC
6 CBLK
7 CP
8 BF
9 WHD
10 VD
11 VDRST
12 GND
13 +5R2VD
14 +5R2VD
15 SYNCIN
16 GND
17 PSSENS
18 G/LVDIN
19 CHARA
20 G/LVDG
21 +5R2VA
22 +5R2VA
23 EXTSUB
24 VD-A/M
PREPRO CN2
CN17
1 P-BLK
2 OBCP
3 NC
4 GND
5 R-PED
6 B-PED
7 G-PED
8 R-GAIN
8 B-GAIN
9 SHT-SW
10 GAMMA-SW
11 NC
12 R-OUT
13 NC
14 R-OUTGND
15 G-OUTGND
16 B-OUT
17 G-OUT
18 B-OUTGND
19 GND
20 GND
21 +5R2VA
22 +5R2VA
23 +2R5V
24 +0R5V
PRE/ENC CN12
CN22
1 GND
2 GND
3 GND
4 GND
5 +7V
6 +7V
7 NC
8 NC
9 RIN
10 RINGND
11 NC
12 NC
13 GIN
14 GINGND
15 NC
16 NC
17 BIN
18 BINGND
19 NC
20 NC
21 -5V
22 -5V
23 GND
24 GND
SYSCON CN3
CN6
24 SEL1
23 SEL2
22 SEL3
21 IRIS-R/A
20 +9R2V
19 +9R2V
18 IRISCNT
17 UPSW
16 DOWNSW
15 LEFTSW
14 -5V
13 -5V
12 RIGHTSW
11 TELESW
10 WIDESW
9 NEARSW
8 FARSW
7 DEFSW
6 WIPESW
5 NC
4 TXD
3 GND
2 RXD
1 GND
POWER CN2
CN12
1 GND
2 GND
3 GND
4 GND
5 +7V
6 +7V
7 +7V
8 +7V
9 NC
10 NC
11 -5V
12 -5V
13 -5V
14 -5V
15 NC
16 NC
17 +9R2V
18 +9R2VRCB
19 +9R2V
20 RCBSENS
21 DC12VIN
22 DC12VIN
23 DC12VIN
24 DC12VIN
PRE/ENC CN3
CN15
1 G/LIN
2 R/PR/C-G
3 G/L-GND
4 R/PR/C
5 +7V
6 +7V
7 B/PB/NC
8 G/Y/SYG
9 B/PB/NCG
10 G/Y/SY
11 -5V
12 -5V
13 VRSTSW
14 COMPG
15 SY/COMPG
16 COMP
17 SY/COMP
18 C/NCGND
19 PSVIDGND
20 C/NC
21 PSVID
22 SYNCG
23 GND
24 SYNC
PREPRO CN3
CN18
1 R-WHTSHD
2 B-WHTSHD
3 G-WHTSHD
4 NC
5 +7V
6 +7V
7 AGC-CNTR
8 AGC-CNTB
9 AGC-CNTG
10 AWC-CNT
11 -5V
12 -5V
13 NC
14 GND
15 GND
16 GND
17 GND
18 CP
19 WHD
20 VD
21 GND
22 GND
23 GND
24 GND
+7V
+5R2VA
IRISF
IC1
16 1 SWUP
15 2 SWDOWN
14 3
13 4 PAGE
12 5 ITEM
11 6
10 7
9 8
C104
SEL3
SEL2
SEL1


LENS+V
ZF12V
FOCUSCNT
LENS+COM
LENS-V
ZOOMCNT
GND
LEFT
RIGHT
UP
DOWN
DEF
WIPE
IC7 (a)
IC7 (b)
IC3 (a)
IC3 (b)
IC3 (c)
IC3 (d)
IC4 (a)
IC4 (b)
IC4 (c)
IC4 (d)
IC5
IC6
IC2 (a)
IC2 (b)
IC2 (c)
IC2 (d)
IC1
D2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
Q10
Q11
Q12
R34 101
R35 622
R36 101
R37 622
R30 103
R31 103
R32 103
R33 103
R22 473
R23 473
R24 473
R25 473
R26 473
R27 473
R28 473
R29 473
R18 104
R19 104
R20 104
R21 104
R44 223
R38 473
R39 473
R40 473
R41 473
R42 473
R43 473
R45 473
R46 473
R47 473
R48 473
R49 473
R50 473
R51 473
R52 473
R53 473
R54 473
R55 473
R56 473
R16 183
R17 363
R14 363
R15 153
R12 183
R13 432
R11 102
R8 622
R9 103
R10 562
C11 33/25
C10 104
C9 104
C8 104
C12 47/16
C7 47/16
C6 104
C5 104
C4 104
C3 10/16
C2 101
C1 104
C34 104
+7V
+5R2VA
IRISF
SWUP
SWDOWN
PAGE
ITEM
SEL3
SEL2
SEL1
ADC-0
FARSW
NEARSW
TELESW
WIDESW
LEFTSW
RIGHTSW
UPSW
DOWNSW
DEFSW
WIPESW
A
B
1
2
3
4

MOTHER BOARD

	IC1	IC2	IC3	IC4	IC5	IC6	IC7	IC8	IC9	IC10	IC11
Pin 1	5.2	0.1	0.3	5.2	5.2	5.2	0.2	1.6	0	4.5	4.9
2	5.2	0	1.9	0	0	0	2.2	3.0	2.5	0.2	0.4
3	0.1	0	0.4	-	0	0	0.3	3.0	2.5	2.2	2.4
4	5.2	0	0.4	5.2	0	0	0	5.2	2.5	2.2	5.0
5	5.2	0	0	0	5.2	5.2	0.3	3.0	2.5	2.2	0.5
6	0	0	0	0			0.2	0.2	2.5	4.9	1.8
7	0	0	2.1	0			0.2	0.6	2.7	0	0
8	0	3.5	0.3	5.2			0	0.6	0	0	4.4
9	0.1	3.5	0.4	0				3.0	0.3	5.0	0.6
10	0.1	3.5	2.1	0				3.0	0.2	0.2	4.9
11	0.1	-5.2	0.4	5.2				-9.0	0	5.0	4.5
12	0.1	1.5	0	0				-6.8	2.2	5.0	0
13	0	0	0	0				-6.8	2.5	0.4	5.0
14	0	1.5	0	5.2				-	0.2	5.0	5.0
15	0.1								2.2		
16	5.2								5.0		

	B	C	E
Q1	0	9.2	0
2	9.2	2.2	8.3
3	0.6	0	0
4	0.6	0	0
5	0.6	0	0
6	0.6	0	0
7	0	0.5	0
8	0	0.5	0
9	0	0.5	0
10	0.1	-	0
11	0	4.0	0
12	0	0.5	0
16	18.9	-4.9	18.8
17	-4.6	-4.9	-5.2
18	4.9	18.8	4.4
19	4.9	-5.2	4.4
20	19.0	21.0	18.8
21	20.0	0	19.3
22	20.5	14.9	21.1
23	0.6	20.5	0
24	1.2	5.0	5.2
25	1.5	4.4	0.9
26	4.5	3.5	5.2
27	0.6	4.5	0
28	-8.4	-8.8	-8.9
29	-	-8.4	0


+7V
+5R2VA
IRISF
IC1
SWUP
SWDOWN
PAGE
ITEM
C1 104
SEL3
SEL2
SEL1
ADC-0
FARSW
NEARSW
TELESW
WIDESW
LEFTSW
RIGHTSW
UPSW
DOWNSW
DEFSW
WIPESW
18 IRISCNT
17 UPSW
16 DOWNSW
15 LEFTSW
14 -5V
13 -5V
12 RIGHTSW
11 TELESW
10 WIDESW
9 NEARSW
8 FARSW
7 DEFSW
6 WIPESW
5 NC
4 TXD
3 GND
2 RXD
1 GND
7 +7V
8 +7V
9 NC
10 NC
11 -5V
12 -5V
13 -5V
14 -5V
15 NC
16 NC
17 +9R2V
18 +9R2VRCB
19 +9R2V
20 RCBSENS
21 DC12VIN
22 DC12VIN
23 DC12VIN
24 DC12VIN
7 B/PB/NC
8 G/Y/SYG
9 B/PB/NCG
10 G/Y/SY
11 -5V
12 -5V
13 VRSTSW
14 COMPG
15 SY/COMPG
16 COMP
17 SY/COMP
18 C/NCGND
19 PSVIDGND
20 C/NC
21 PSVID
22 SYNCG
23 GND
24 SYNC
7 AGC-CNTR
8 AGC-CNTB
9 AGC-CNTG
10 AWC-CNT
11 -5V
12 -5V
13 NC
14 GND
15 GND
16 GND
17 GND
18 CP
19 WHD
20 VD
21 GND
22 GND
23 GND
24 GND
REAR CN3
CN21
1 SWUP
2 SWDOWN
3 ITEM
4 PAGE
5 ZF12V
6 FOCUSCNT
7 ZOOMCNT
8 LENS+COM
9 LENS+V
10 LENS-V
11 NC
12 GND
13 UP
14 DOWN
15 LEFT
16 RIGHT
17 DEF
18 WIPE
19 -5V
20 -5V
21 TXD
22 RXD
23 GND
24 GND
REAR CN2
CN20
1 G/LVDG
2 G/LVDIN
3 EXTSUB
4 VD-A/M
5 SYNCGND
6 SYNC
7 +5R2VA
8 +5R2VA
9 GND
10 GND
11 RCBSENS
12 +9R2VRCB
13 +9R2V
14 +9R2V
15 A/MCNT
16 DC12VIN
17 IRIS-R/A
18 DC12VIN
19 IRISCNT
20 DC12VIN
21 IRISF
22 DC12VIN
23 PSSENS
24 VRSTSW
REAR CN1
CN19
1 B/PB/NCG
2 B/PB/NC
3 GND
4 GND
5 R/PR/C-G
6 R/PR/C
7 GND
8 GND
9 G/Y/SYG
10 G/Y/SY
11 COMPG
12 COMP
13 SY/COMPG
14 SY/COMP
15 GND
16 GND
17 C/NCGND
18 C/NC
19 GND
20 GND
21 PSVIDGND
22 PSVID
23 G/L-GND
24 G/LIN
R1 473
R2 473
R3 473
R4 473
R5 472
R6 102
Q1
Q2
D1
4
5
6
7
8

Note: **The value indicated in the schematic diagram should be read as follows:**

☐ ☐ ☐

Multiplier (0 - 5)

2nd. Significant Digit (0 - 9)

1st. Siginificant Digit (1 - 9)

<Example>

For Resistor:

330 ⟶ 33×10^0 = 33 Ω

561 ⟶ 56×10^1 = 560 Ω

123 ⟶ 12×10^3 = 12k Ω

0R00 = 0 Ω

For Capacitor:

820 ⟶ 82×10^0 = 82 pF

102 ⟶ 10×10^2 = 1000 pF = 0.001 μF

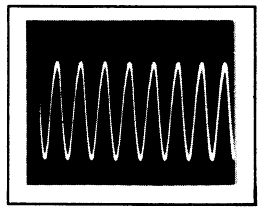
104 ⟶ 10×10^4 = 100000 pF = 0.1 μF

The suffix attached to capacitance indicates a type of capacitor.

SCHEMATIC DIAGRAM OF SYSTEM CO

SYSTEM CONTROL BOARD

1. 0.1µsec/DIV 1V/DIV



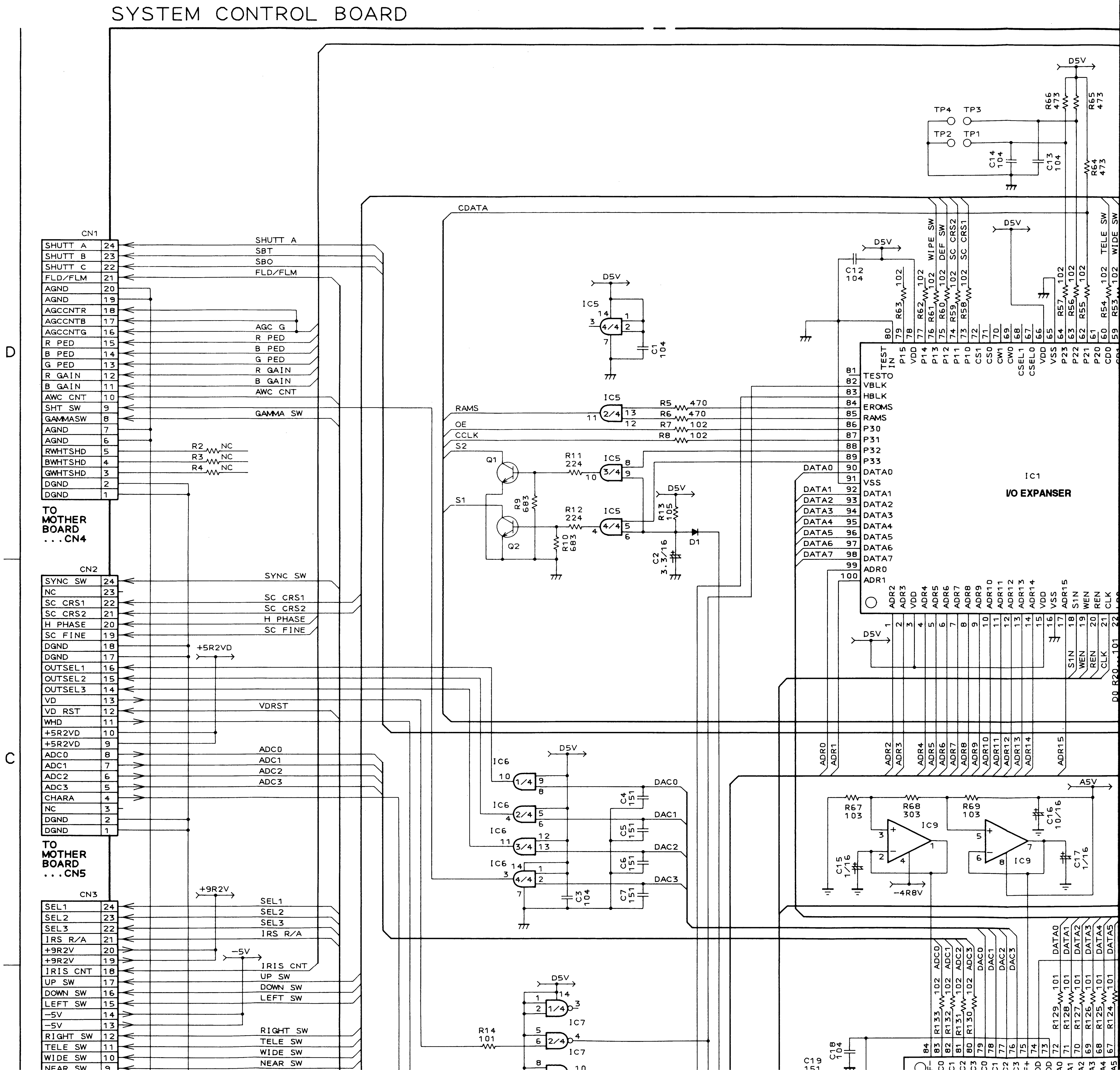
< Index>
SYSTEM CONTROL BOARD

IC1	D3
IC2	B3
IC3	C4
IC4	C5
IC5	D2
IC6	C2
IC7	B2
IC8	A2, B2
IC9	C3
IC10	A4
IC12	D4
IC13	D5
IC14	B5, C5
IC15	C6
IC16	B4, B5
IC17	B4
IC18	B4
IC19	A6, B6
Q1	D2
Q2	D2
Q9	A3
Q10	A3
Q11	A3
Q12	B5
Q13	B5
Q14	C5
Q15	C5
Q16	B6
Q17	B6
Q18	A6
Q19	A6
Q20	A6
Q21	A6
D1	D2
D3	A3
D4	A3
D5	A3
D6	A3
D7	B5
D8	B5
D9	C5
D10	B5

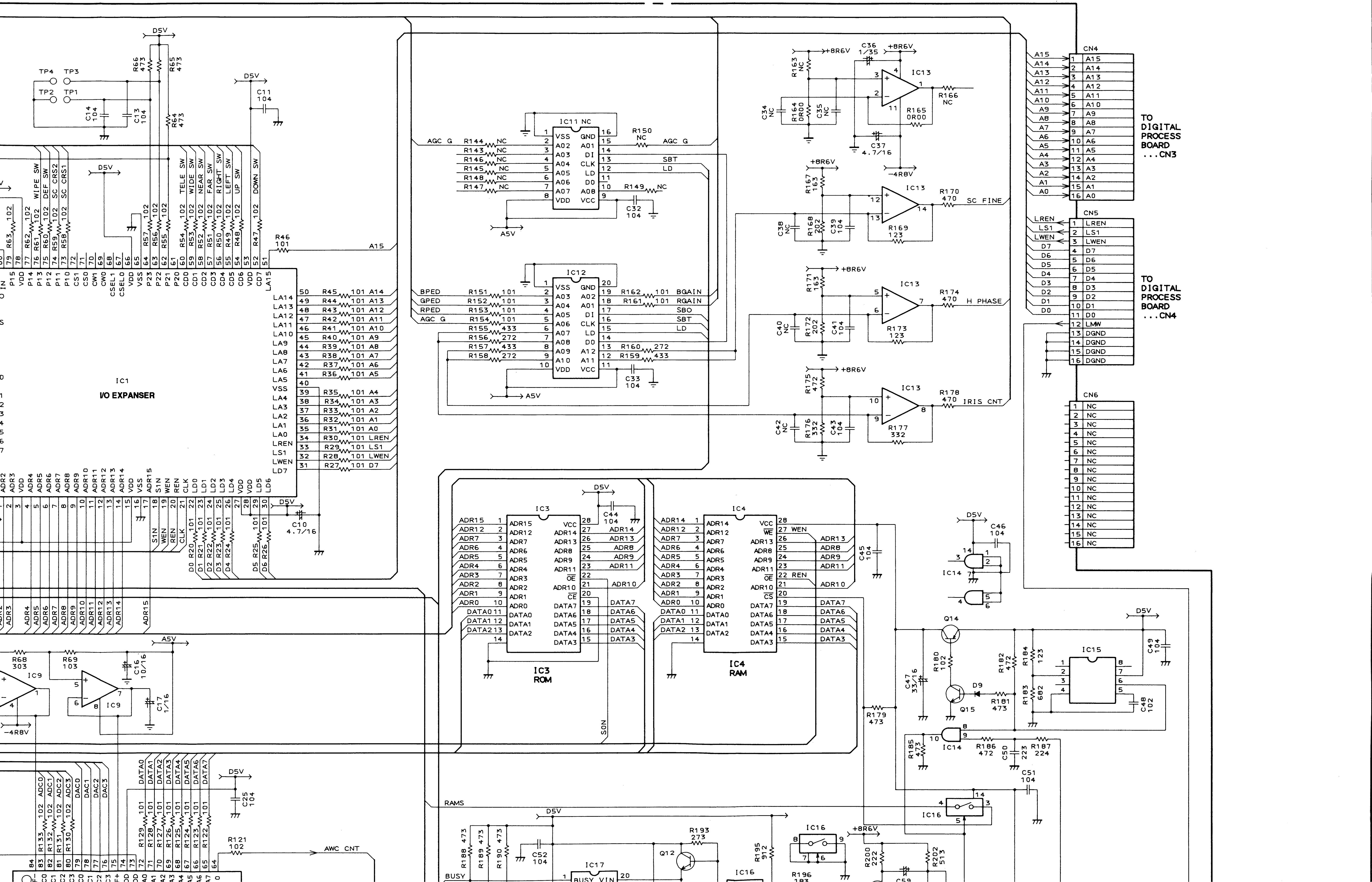
SYSTEM CONTROL BOARD

	IC5	IC6	IC7	IC8	IC9	IC10	IC14	IC16	IC18	IC19	IC17
Pin 1	5.0	5.0	5.0	5.0	1.0	0.3	0	1.2	2.1	0.7	0
2	5.0	3.7	5.0	5.0	1.0	1.4	0	1.2	0	1.3	5.0
3	5.0	4.9	0	5.0	1.0	0.4	0	4.9	5.0	1.3	0
4	0	5.0	4.8	5.0	-5.0	0	0	2.9	5.0	5.2	5.0
5	0	5.0	5.0	5.0	4.0	1.2	0	4.9	5.0	-1.3	5.0
6	4.7	3.7	0.2	5.0	3.7	4.7	0	0	2.1	-1.3	0.5
7	0	0	0	0	3.7	5.0	0	0	2.1	-0.5	2.5
8	0	1.1	5.0	5.0	5.0	0.5	4.7	0	0	0	2.4
9	4.7	5.0	5.0	5.2			4.6	0	0	0	2.4
10	0	0	0	5.0			5.0	5.0	0	0	0
11	3.9	5.0	4.2	5.0			5.0	5.0	2.1	-5.2	4.8
12	3.7	5.0	5.0	5.0			4.7	5.0	0	2.2	5.0
13	5.0	3.7	0.8	-			4.7	5.0	-	2.2	4.8
14	5.0	5.0	5.0	5.0			5.0	5.0	0	0.5	0.6
15											0
16											5.0
17											0
18											0
19											1.2
20											1.2

	B	C	E
Q2	0	2.1	0
9	4.2	4.9	5.0
10	0.7	0.1	0
12	1.7	5.0	1.2
13	0.3	0	0.9


SYSTEM CONTROL BOARD
D
C
CN1
SHUTT A
SHUTT B
SHUTT C
FLD/FLM
AGND
AGCCNTR
AGCCNTB
AGCCNTG
R PED
B PED
G PED
R GAIN
B GAIN
AWC CNT
SHT SW
GAMMASW
RWHTSHD
BWHTSHD
GWHTSHD
DGND
TO MOTHER BOARD ...CN4
SBT
SBO
AGC G
GAMMA SW
R2 NC
R3 NC
R4 NC
CN2
SYNC SW
NC
SC CRS1
SC CRS2
H PHASE
SC FINE
OUTSEL1
OUTSEL2
OUTSEL3
VD
VD RST
WHD
+5R2VD
ADC0
ADC1
ADC2
ADC3
CHARA
VDRST
TO MOTHER BOARD ...CN5
CN3
SEL1
SEL2
SEL3
IRS R/A
+9R2V
IRIS CNT
UP SW
DOWN SW
LEFT SW
-5V
RIGHT SW
TELE SW
WIDE SW
NEAR SW
CDATA
RAMS
OE
CCLK
S2
S1
Q1
Q2
R9 683
R10 683
R11 224
R12 224
R13 105
C2 3.3/16
D1
IC5
C1 104
R5 470
R6 470
R7 102
R8 102
D5V
C12 104
TP4
TP3
TP2
TP1
C14 104
C13 104
R66 473
R65 473
R64 473
IC1
I/O EXPANSER
TESTO
VBLK
HBLK
EROMS
RAMS
P30
P31
P32
P33
DATA0
VSS
DATA1
DATA2
DATA3
DATA4
DATA5
DATA6
DATA7
ADR0
ADR1
WIPE SW
DEF SW
SC CRS2
SC CRS1
TELE SW
WIDE SW
S1N
WEN
REN
CLK
IC6
C3 104
C4 151
C5 151
C6 151
C7 151
DAC0
DAC1
DAC2
DAC3
IC9
R67 103
R68 303
R69 103
C15 1/16
C16 10/16
C17 1/16
-4R8V
A5V
IC7
R14 101
C18 104
C19

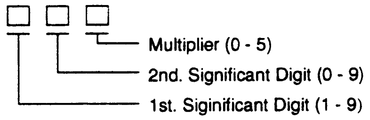
M OF SYSTEM CONTROL BOARD (WV-E550E)



IC1
I/O EXPANSER
IC3
ROM
IC4
RAM
IC9
IC11
IC12
IC13
IC14
IC15
IC16
IC17
Q12
Q14
Q15
D9
CN4
CN5
CN6
TO DIGITAL PROCESS BOARD ...CN3
TO DIGITAL PROCESS BOARD ...CN4
TP1
TP2
TP3
TP4
D5V
A5V
+8R6V
-4R8V
AGC G
SBT
LD
BPED
GPED
RPED
BGAIN
RGAIN
SBO
SC FINE
H PHASE
IRIS CNT
WIPE SW
DEF SW
SC CRS2
SC CRS1
TELE SW
WIDE SW
NEAR SW
FAR SW
RIGHT SW
LEFT SW
UP SW
DOWN SW
LREN
LS1
LWEN
LMW
DGND
WEN
REN
S0N
RAMS
BUSY
AWC CNT
ADC0
ADC1
ADC2
ADC3
DAC0
DAC1
DAC2
DAC3
DATA0
DATA1
DATA2
DATA3
DATA4
DATA5
DATA6
DATA7

7	0	0	0	0	3.7	5.0	0	0	2.1	-0.5	2.5
8	0	1.1	5.0	5.0	5.0	0.5	4.7	0	0	0	2.4
9	4.7	5.0	5.0	5.2			4.6	0	0	0	2.4
10	0	0	0	5.0			5.0	5.0	0	0	0
11	3.9	5.0	4.2	5.0			5.0	5.0	2.1	-5.2	4.8
12	3.7	5.0	5.0	5.0			4.7	5.0	0	2.2	5.0
13	5.0	3.7	0.8	-			4.7	5.0	-	2.2	4.8
14	5.0	5.0	5.0	5.0			5.0	5.0	0	0.5	0.6
15											0
16											5.0
17											0
18											0
19											1.2
20											1.2

Note: **The value indicated in the schematic diagram should be read as follows:**


Multiplier (0 - 5)
2nd. Significant Digit (0 - 9)
1st. Significant Digit (1 - 9)

<Example>

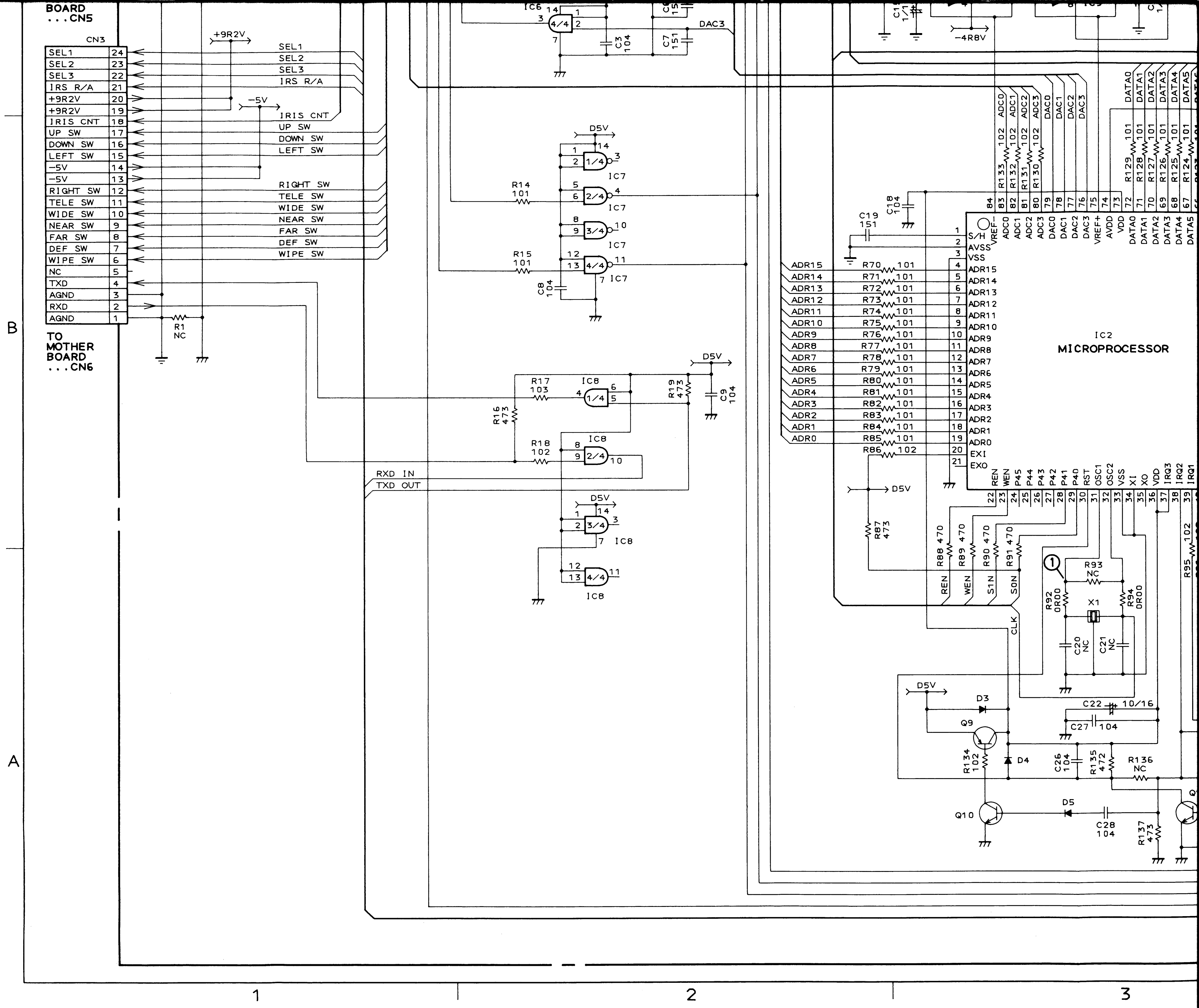
For Resistor:

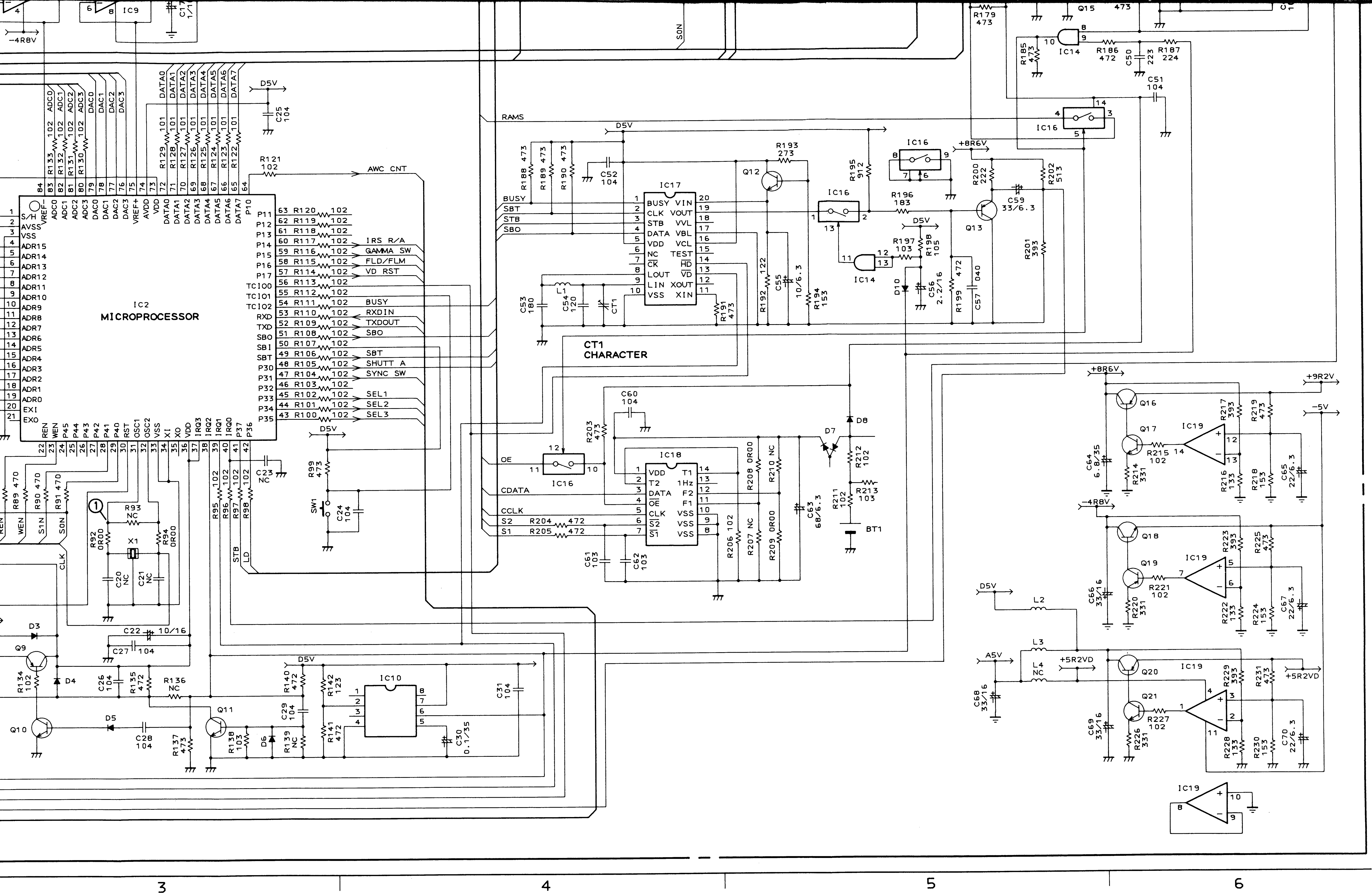
330 ⟶ 33 x 10^0 = 33 Ω
561 ⟶ 56 x 10^1 = 560 Ω
123 ⟶ 12 x 10^3 = 12k Ω
0R00 = 0 Ω

For Capacitor:

820 ⟶ 82 x 10^0 = 82 pF
102 ⟶ 10 x 10^2 = 1000 pF = 0.001 μF
104 ⟶ 10 x 10^4 = 100000 pF = 0.1 μF

The suffix attached to capacitance indicates a type of capacitor.

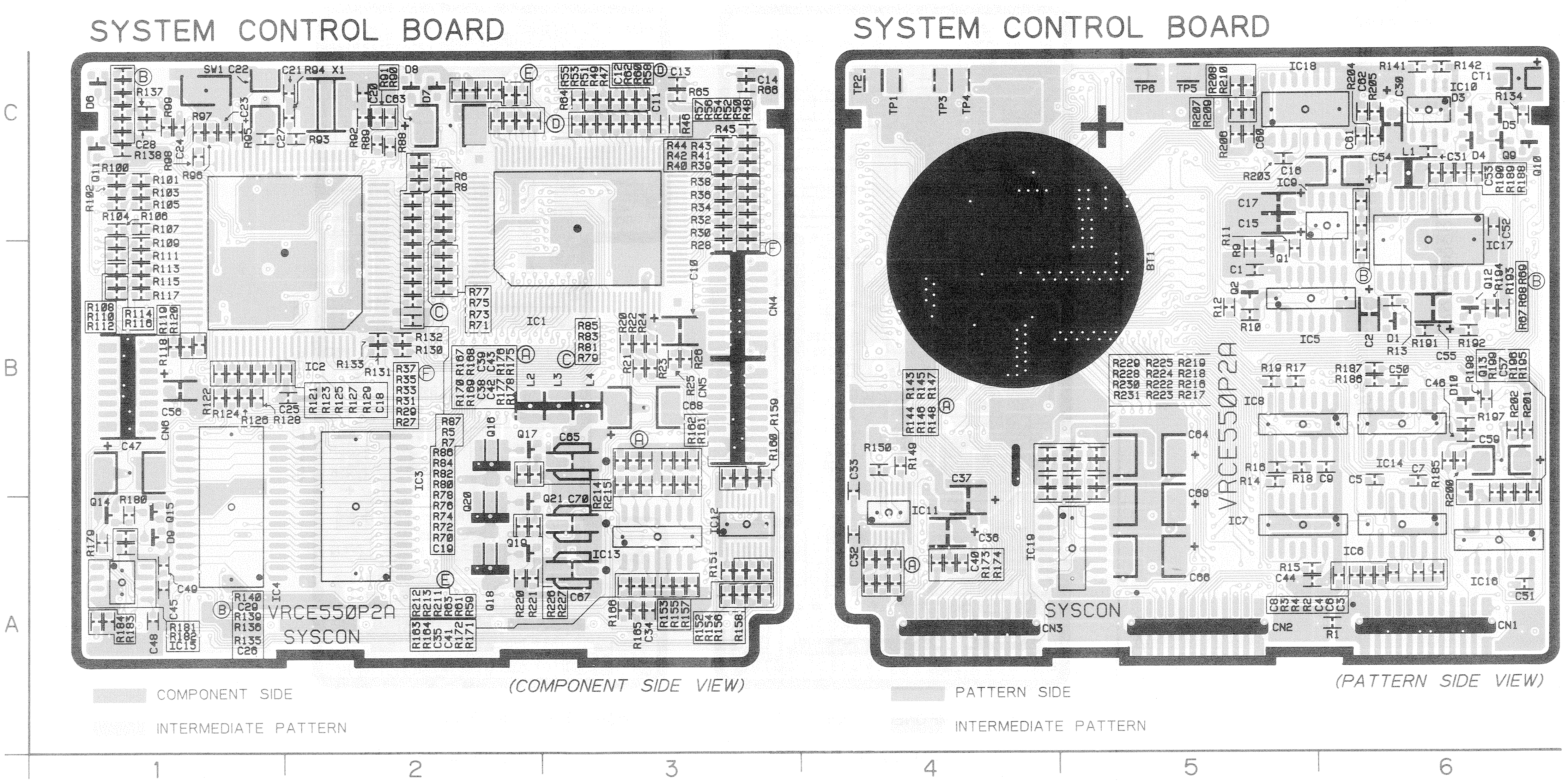

BOARD
...CN5
CN3
SEL1
SEL2
SEL3
IRS R/A
+9R2V
+9R2V
IRIS CNT
UP SW
DOWN SW
LEFT SW
-5V
-5V
RIGHT SW
TELE SW
WIDE SW
NEAR SW
FAR SW
DEF SW
WIPE SW
NC
TXD
AGND
RXD
AGND
TO
MOTHER
BOARD
...CN6
R1
NC
RXD IN
TXD OUT
IC6
IC7
IC8
DAC3
D5V
-4R8V
R14 101
R15 101
R16 473
R17 103
R18 102
R19 473
C3 104
C7 151
C8 104
C9 104
C18 104
C19 151
IC2
MICROPROCESSOR
ADR15
ADR14
ADR13
ADR12
ADR11
ADR10
ADR9
ADR8
ADR7
ADR6
ADR5
ADR4
ADR3
ADR2
ADR1
ADR0
S/H
AVSS
VSS
EXI
EXO
VREF-
ADC0
ADC1
ADC2
ADC3
DAC0
DAC1
DAC2
DAC3
VREF+
AVDD
VDD
DATA0
DATA1
DATA2
DATA3
DATA4
DATA5
REN
WEN
P45
P44
P43
P42
P41
P40
RST
OSC1
OSC2
VSS
XI
XO
VDD
IRQ3
IRQ2
IRQ1
R70 101
R71 101
R72 101
R73 101
R74 101
R75 101
R76 101
R77 101
R78 101
R79 101
R80 101
R81 101
R82 101
R83 101
R84 101
R85 101
R86 102
R87 473
R88 470
R89 470
R90 470
R91 470
R92 0R00
R93 NC
R94 0R00
R95 102
R124 101
R125 101
R126 101
R127 101
R128 101
R129 101
R130 102
R131 102
R132 102
R133 102
REN
WEN
S1N
S0N
CLK
①
X1
C20 NC
C21 NC
C22 10/16
C26 104
C27 104
C28 104
D3
D4
D5
Q9
Q10
R134 102
R135 472
R136 NC
R137 473
B
A
1
2
3


IC2
MICROPROCESSOR
S/H
AVSS
VSS
VREF-
ADC0
ADC1
ADC2
ADC3
DAC0
DAC1
DAC2
DAC3
VREF+
AVDD
VDD
DATA0
DATA1
DATA2
DATA3
DATA4
DATA5
DATA6
DATA7
P10
P11
P12
P13
P14
P15
P16
P17
TCI00
TCI01
TCI02
RXD
TXD
SBO
SBI
SBT
P30
P31
P32
P33
P34
P35
ADR15
ADR14
ADR13
ADR12
ADR11
ADR10
ADR9
ADR8
ADR7
ADR6
ADR5
ADR4
ADR3
ADR2
ADR1
ADR0
EXI
EXO
REN
WEN
P45
P44
P43
P42
P41
P40
RST
OSC1
OSC2
XI
XO
IRQ3
IRQ2
IRQ1
IRQ0
P37
P36
D5V
C25 104
R121 102
AWC CNT
IRS R/A
GAMMA SW
FLD/FLM
VD RST
BUSY
RXDIN
TXDOUT
SBO
SBT
SHUTT A
SYNC SW
SEL1
SEL2
SEL3
R133 102
R132 102
R131 102
R130 102
R129 101
R128 101
R127 101
R126 101
R125 101
R124 101
R123 101
R122 101
R120 102
R119 102
R118 102
R117 102
R116 102
R115 102
R114 102
R113 102
R112 102
R111 102
R110 102
R109 102
R108 102
R107 102
R106 102
R105 102
R104 102
R103 102
R102 102
R101 102
R100 102
R89 470
R90 470
R91 470
REN
WEN
S1N
S0N
CLK
R93 NC
R92 0R00
R94 0R00
X1
C20 NC
C21 NC
R95 102
R96 102
R97 102
R98 102
STB
LD
C23 NC
R99 473
SW1
C24 104
D3
Q9
R134 102
D4
Q10
D5
C28 104
C22 10/16
C27 104
C26 104
R135 472
R136 NC
R137 473
Q11
R138 103
D6
R139 NC
R140 472
C29 104
R142 123
R141 472
IC10
C30 0.1/35
C31 104
-4R8V
IC9
S0N
RAMS
IC17
BUSY
CLK
STB
DATA
VDD
NC
CK
LOUT
LIN
VSS
VIN
VOUT
VVL
VBL
VCL
TEST
HD
VD
XOUT
XIN
R188 473
R189 473
R190 473
C52 104
C53 180
L1
C54 120
CT1
R191 473
CT1
CHARACTER
Q12
R193 273
R192 122
C55 10/6.3
R194 153
R195 912
IC16
R196 183
R197 103
R198 105
IC14
D10
C56 2.2/16
R199 472
C57 040
Q13
R200 222
R202 513
C59 33/6.3
R201 393
+8R6V
R179 473
Q15
473
R185 473
IC14
R186 472
C50 223
R187 224
C51 104
IC16
IC18
VDD
T2
DATA
OE
CLK
S2
S1
T1
1Hz
F2
F1
VSS
OE
CDATA
CCLK
S2
S1
R204 472
R205 472
C61 103
C62 103
R203 473
C60 104
R206 102
R207 NC
R208 0R00
R209 0R00
R210 NC
C63 68/6.3
D7
D8
R212 102
R211 102
R213 103
BT1
+8R6V
Q16
Q17
R215 102
IC19
R214 331
C64 6.8/35
R216 133
R217 393
R218 153
R219 473
C65 22/6.3
+9R2V
-5V
-4R8V
Q18
Q19
R221 102
R220 331
C66 33/16
R222 133
R223 393
R224 153
R225 473
C67 22/6.3
D5V
L2
L3
A5V
L4 NC
+5R2VD
C68 33/16
Q20
Q21
R227 102
R226 331
C69 33/16
R228 133
R229 393
R230 153
R231 473
C70 22/6.3
+5R2VD
3
4
5
6

CONDUCTOR VIEW OF SYSTEM CONTROL BOARD (WV-E550E)

< Index>
SYSTEM CONTROL BOARD

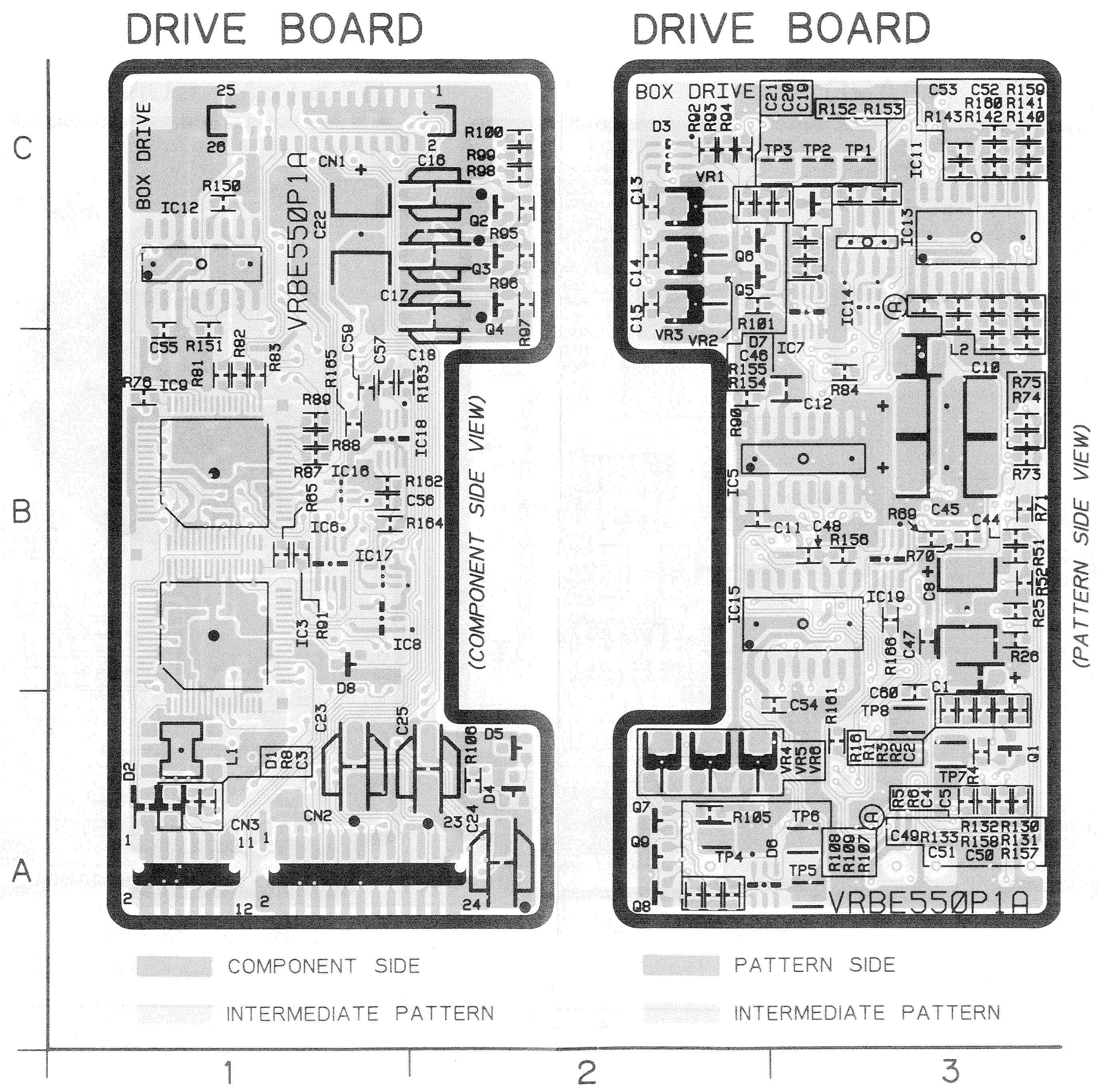
IC1	B2
IC2	B2
IC3	B2
IC4	A1
IC5	B5
IC6	B6
IC7	B5
IC8	B5
IC9	C5
IC10	C6
IC12	A3
IC13	A3
IC14	B6
IC15	A1
IC16	B6
IC17	B6
IC18	C5
IC19	A4
Q1	B5
Q2	B5
Q9	C6
Q10	C6
Q11	C1
Q12	B6
Q13	B6
Q14	A1
Q15	A1
Q16	B2
Q17	B2
Q18	A2
Q19	A2
Q20	A2
Q21	A2
D1	B6
D3	C6
D4	C6
D5	C6
D6	C1
D7	C2
D8	C2
D9	A1
D10	B6


SYSTEM CONTROL BOARD
SYSTEM CONTROL BOARD
C
B
A
1
2
3
4
5
6
VRCE550P2A
SYSCON
IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC13
IC14
IC16
IC17
IC18
IC19
CN2
CN3
CN4
CN1
BT1
(COMPONENT SIDE VIEW)
(PATTERN SIDE VIEW)
COMPONENT SIDE
PATTERN SIDE
INTERMEDIATE PATTERN
INTERMEDIATE PATTERN

CONDUCTOR VIEW OF DRIVE BOARD (WV-E550E)

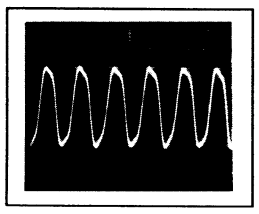
< Index>
DRIVE BOARD

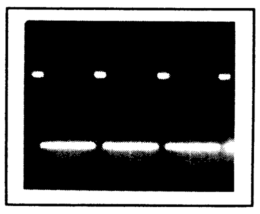
IC3	B1
IC7	C3
IC8	B1
IC9	B1
IC11	C3
IC12	C1
IC15	B3
IC16	B1
IC17	B1
IC18	B1
IC19	B3
Q1	A3
Q2	C2
Q3	C2
Q4	C2
Q5	C2
Q6	C2
Q7	A2
Q8	A2
Q9	A2
D1	A1
D2	A1
D3	C2
D4	A2
D5	A2
D6	A2
D7	C3
D8	B1

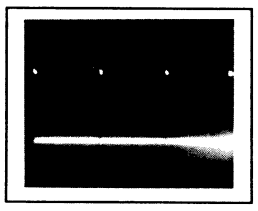

DRIVE BOARD
DRIVE BOARD
C
B
A
1
2
3
BOX DRIVE
VRBE550P1A
(COMPONENT SIDE VIEW)
(PATTERN SIDE VIEW)
CN1
CN2
CN3
IC3
IC6
IC7
IC8
IC9
IC11
IC12
IC13
IC14
IC15
IC16
IC17
IC18
IC19
IC5
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
D1
D2
D3
D4
D5
D6
D7
D8
L1
L2
VR1
VR2
VR3
VR4
VR5
VR6
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
R150
R151
R152
R153
C55
C57
C59
C22
C23
C24
C25
C16
C17
C18
R100
R99
R98
R95
R96
R97
R76
R81
R82
R83
R89
R88
R87
R85
R91
R105
R162
R163
R164
C56
R106
C53
C52
R159
R160
R141
R143
R142
R140
C21
C20
C19
R92
R93
R94
C13
C14
C15
R101
C46
R155
R154
C12
R84
C10
R75
R74
R73
R90
C45
C44
R69
C11
C48
R156
R70
R71
R51
R52
R25
R26
C8
C47
R166
C60
C1
C54
R161
R10
R1
R3
R2
C2
R4
R5
R6
C4
C5
R132
R130
R133
R158
R131
C49
C51
C50
R157
R108
R109
R107
R105
A
COMPONENT SIDE
INTERMEDIATE PATTERN
PATTERN SIDE
INTERMEDIATE PATTERN

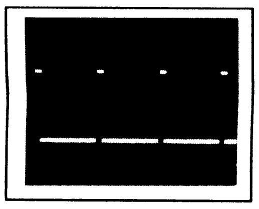
SCHEMATIC DIAGRAM OF DRIVE

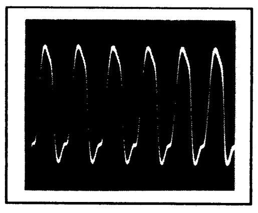
DRIVE BOARD

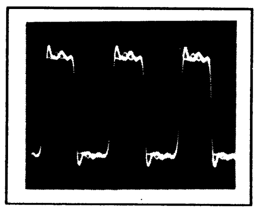

1. 20nsec/DIV 0.5V/DIV

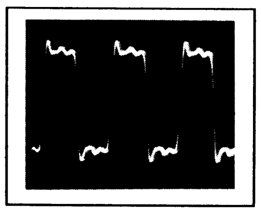

2. 20nsec/DIV 1V/DIV

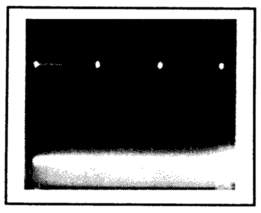

3. 5msec/DIV 1V/DIV

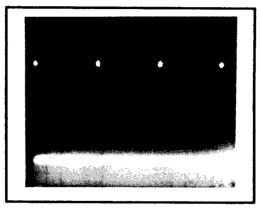

4. 20μsec/DIV 1V/DIV

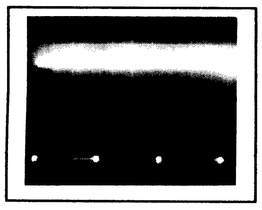

5. 20μsec/DIV 1V/DIV

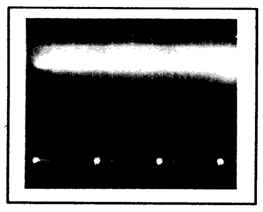

6. 20nsec/DIV 1V/DIV

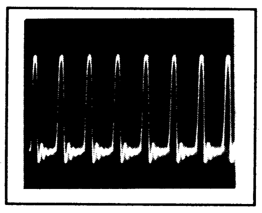

7. 20nsec/DIV 1V/DIV

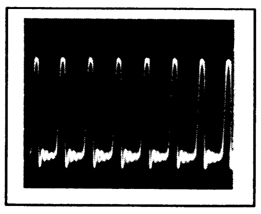

8. 20μsec/DIV 1V/DIV

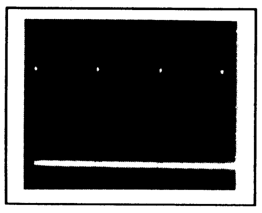

9. 20μsec/DIV 1V/DIV

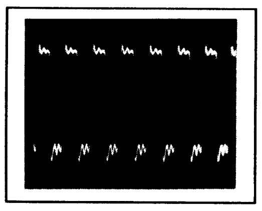

10. 20μsec/DIV 1V/DIV

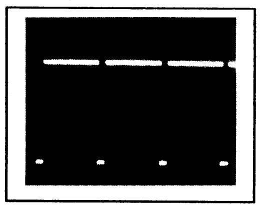

11. 20μsec/DIV 1V/DIV

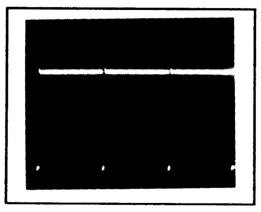

12. 50nsec/DIV 1V/DIV

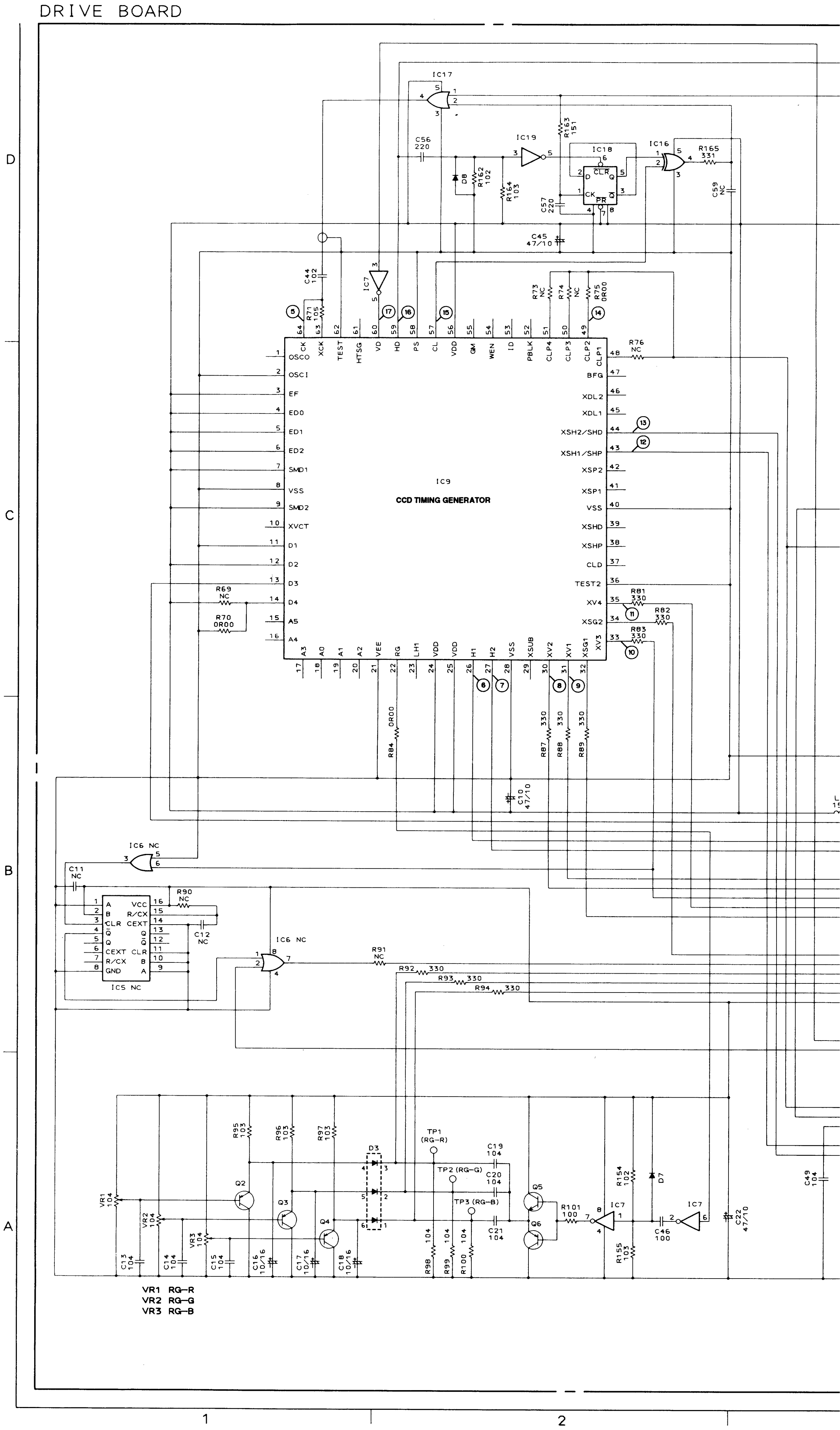

13. 50nsec/DIV 1V/DIV


14. 20μsec/DIV 1V/DIV


15. 50nsec/DIV 1V/DIV


16. 20μsec/DIV 1V/DIV


17. 5msec/DIV 1V/DIV


DRIVE BOARD
A
B
C
D
1
2
IC9
CCD TIMING GENERATOR
OSCO
OSCI
EF
ED0
ED1
ED2
SMD1
VSS
SMD2
XVCT
D1
D2
D3
D4
A5
A4
A3
A0
A1
A2
VEE
RG
LH1
VDD
H1
H2
XSUB
XV2
XV1
XSG1
XV3
XSG2
XV4
TEST2
CLD
XSHP
XSHD
XSP1
XSP2
XSH1/SHP
XSH2/SHD
XDL1
XDL2
BFG
CLP1
CLP2
CLP3
CLP4
PBLK
ID
WEN
GM
CL
PS
HD
VD
HTSG
TEST
XCK
CK
IC17
IC19
IC18
IC16
IC7
IC6 NC
IC5 NC
C56 220
R162 102
R164 103
D8
C57 220
C45 47/10
R163 151
R165 331
C59 NC
C44 102
R71 105
R73 NC
R74 NC
R75 0R00
R76 NC
R81 330
R82 330
R83 330
R69 NC
R70 0R00
R84 0R00
R87 330
R88 330
R89 330
C10 47/10
C11 NC
C12 NC
R90 NC
R91 NC
R92 330
R93 330
R94 330
R95 103
R96 103
R97 103
VR1 104
VR2 104
VR3 104
C13 104
C14 104
C15 104
C16 10/16
C17 10/16
C18 10/16
Q2
Q3
Q4
Q5
Q6
D3
TP1 (RG–R)
TP2 (RG–G)
TP3 (RG–B)
C19 104
C20 104
C21 104
R98 104
R99 104
R100 104
R101 100
R154 102
R155 103
D7
C46 100
C22 47/10
C49 104
VR1 RG–R
VR2 RG–G
VR3 RG–B

< Index>
DRIVE BOARD

IC3	C4
IC7	A2, D2
IC8	A5
IC9	C2
IC11	A3, A4
IC12	B5, C6
IC15	A4, B4, C5
IC16	D2
IC17	D2
IC18	D2
IC19	C3, D2, D3
Q1	D3
Q2	A1
Q3	A1
Q4	A1
Q5	A2
Q6	A2
Q7	A5
Q8	A5
Q9	A5
D1	D3
D2	D4
D3	A1
D4	A5
D5	A5
D6	A6
D7	A2
D8	D2

DRIVE BOARD

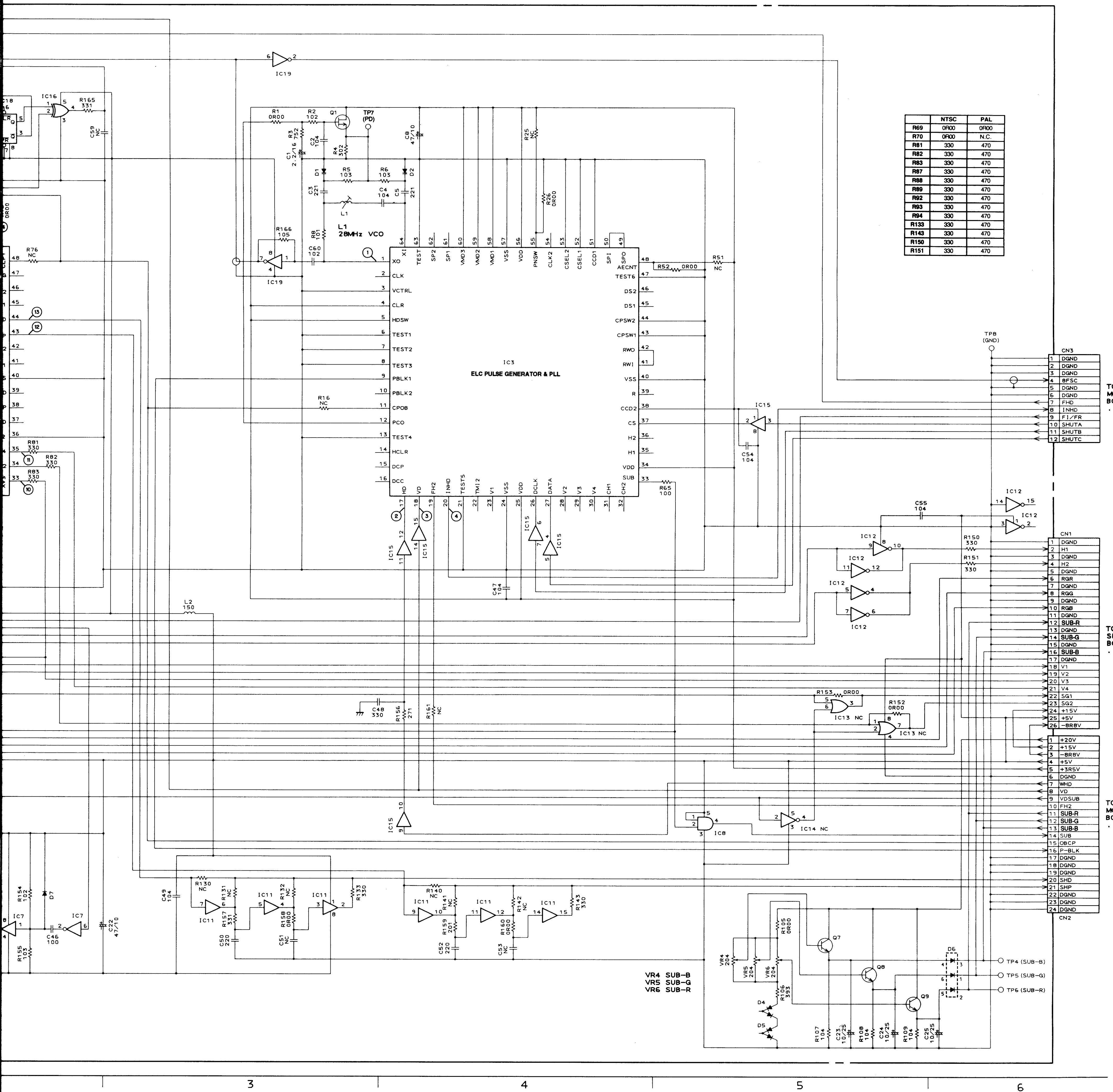
	IC3	IC9
Pin 1	1.7	4.7
2	1.7	0
3	0	4.7
4	3.5	4.7
5	3.5	4.7
6	0	4.8
7	0	4.6
8	0	0
9	0.7	4.7
10	0.6	4.6
11	0	0
12	1.8	4.7
13	0	0
14	0.1	0
15	0.1	1.4
16	0.5	1.8
17	0.1	1.2
18	3.6	1.4
19	0	1.4
20	3.5	1.4
21	3.2	0
22	3.2	1.3
23	0	4.8
24	3.5	4.8
25	3.4	4.7
26	3.4	2.5
27	2.5	2.2
28	3.3	0
29	0.1	4.7
30	3.5	0.2
31	3.5	0.1
32	3.4	4.7

	IC3	IC9
Pin 33	3.4	4.5
34	3.5	4.8
35	1.9	4.5
36	1.6	0
37	0	2.2
38	3.5	3.5
39	3.2	3.5
40	0	0
41	1.8	4.7
42	1.8	4.7
43	0	1.0
44	0	1.1
45	0.9	4.7
46	0.9	0
47	0	0
48	0	0.2
49	1.7	0.1
50	1.7	0.1
51	0	0.1
52	0	4.0
53	0	0
54	0	4.8
55	1.7	0
56	0	4.8
57	3.5	2.4
58	0	0
59	3.5	4.4
60	3.5	4.7
61	3.5	4.7
62	0.5	0
63	0	2.4
64	1.7	2.2

	IC7	IC8	IC11	IC12	IC15	IC16	IC17	IC18	IC19
Pin 1	4.7	4.9	4.8	4.9	3.5	2.3	2.2	2.3	2.3
2	1.3	3.4	1.1	4.9	3.5	2.4	2.4	2.4	2.4
3	0.6	0	1.1	1.2	4.9	0	0	2.4	2.4
4	4.8	4.8	1.1	2.6	3.4	0	3.3	0	0
5	4.2	4.9	1.2	2.3	4.8	4.8	4.8	2.4	2.4
6	3.4		1.2	2.6	3.4			4.9	2.4
7	0.2		1.1	2.3	5.0			4.9	2.4
8	0		0	0	0			4.9	4.9
9			1.0	2.6	0.7				
10			1.1	2.3	0.5				
11			1.1	2.5	0.5				
12			1.1	2.2	0.5				
13			-	-	1.6				
14			1.1	0	0.2				
15			1.1	4.8	0.1				
16			-	-	-				

	B	C	E
Q1	(G) 1.8	(D) 3.5	(S) 2.1
2	1.1	0	0.5
3	3.4	0	2.8
4	3.5	0	2.9
5	0.6	4.8	0.5
6	0.6	1.6	0.5
7	13.3	18.6	12.8
8	13.7	18.6	13.2
9	13.9	18.6	13.4

M OF DRIVE BOARD (WV-E550E)


IC3
ELC PULSE GENERATOR & PLL
L1
28MHz VCO
TP7
(PD)
TP8
(GND)
CN3
TO
MOTHER
BOARD
...CN25
CN1
TO
SENSOR
BOARD
...CN1
CN2
TO
MOTHER
BOARD
...CN24
TP4 (SUB-B)
TP5 (SUB-G)
TP6 (SUB-R)
VR4 SUB-B
VR5 SUB-G
VR6 SUB-R
3
4
5
6

	NTSC	PAL
R69	0R00	0R00
R70	0R00	N.C.
R81	330	470
R82	330	470
R83	330	470
R87	330	470
R88	330	470
R89	330	470
R92	330	470
R93	330	470
R94	330	470
R133	330	470
R143	330	470
R150	330	470
R151	330	470

Note: The value indicated in the schematic diagram should be read as follows:

□ □ □
Multiplier (0 - 5)
2nd. Significant Digit (0 - 9)
1st. Siginificant Digit (1 - 9)

<Example>

For Resistor:

330 → 33 x 10^0 = 33 Ω
561 → 56 x 10^1 = 560 Ω
123 → 12 x 10^3 = 12k Ω
0R00 = 0 Ω

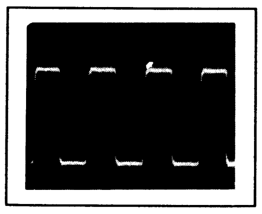
For Capacitor:

820 → 82 x 10^0 = 82 pF
102 → 10 x 10^2 = 1000 pF = 0.001 µF
104 → 10 x 10^4 = 100000 pF = 0.1 µF
The suffix attached to capacitance indicates
a type of capacitor.

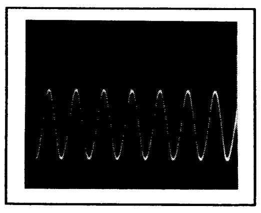
SCHEMATIC DIAGRAM OF SYNC B

SYNC BOARD

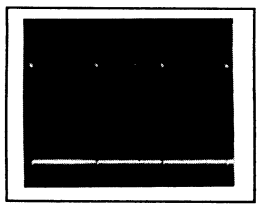
1. 0.1µsec/DIV 1V/DIV



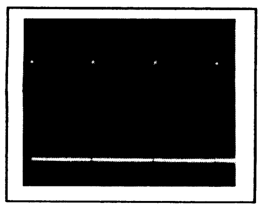
2. 50nsec/DIV 1V/DIV



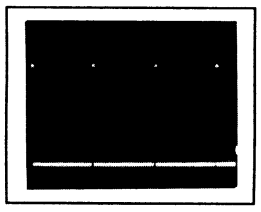
3. 5msec/DIV 1V/DIV



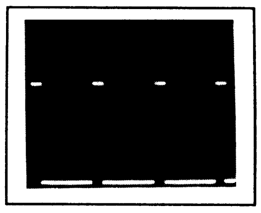
4. 20µsec/DIV 1V/DIV



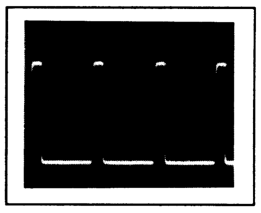
5. 20µsec/DIV 1V/DIV



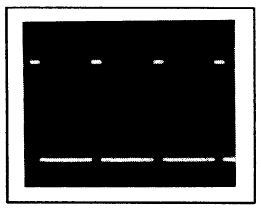
6. 20µsec/DIV 1V/DIV



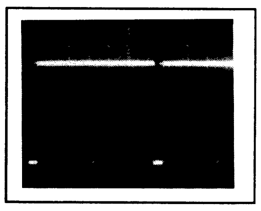
7. 20µsec/DIV 1V/DIV



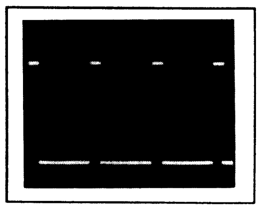
8. 20µsec/DIV 1V/DIV



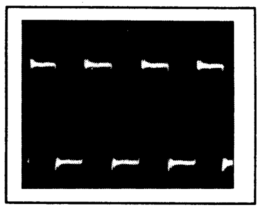
9. 10µsec/DIV 1V/DIV



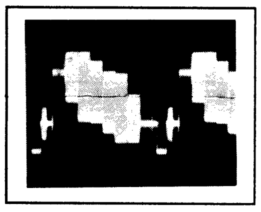
10. 20µsec/DIV 1V/DIV



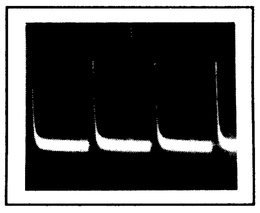
11. 0.1µsec/DIV 1V/DIV



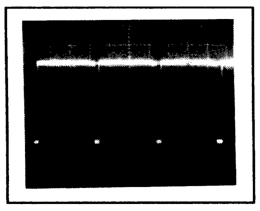
12. 10µsec/DIV 0.2V/DIV



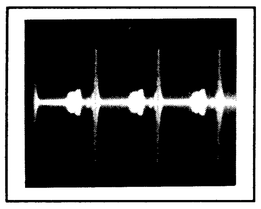
13. 20µsec/DIV 0.1V/DIV



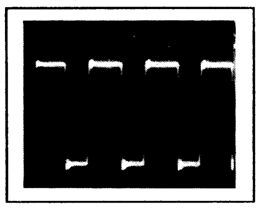
14. 20µsec/DIV 1V/DIV

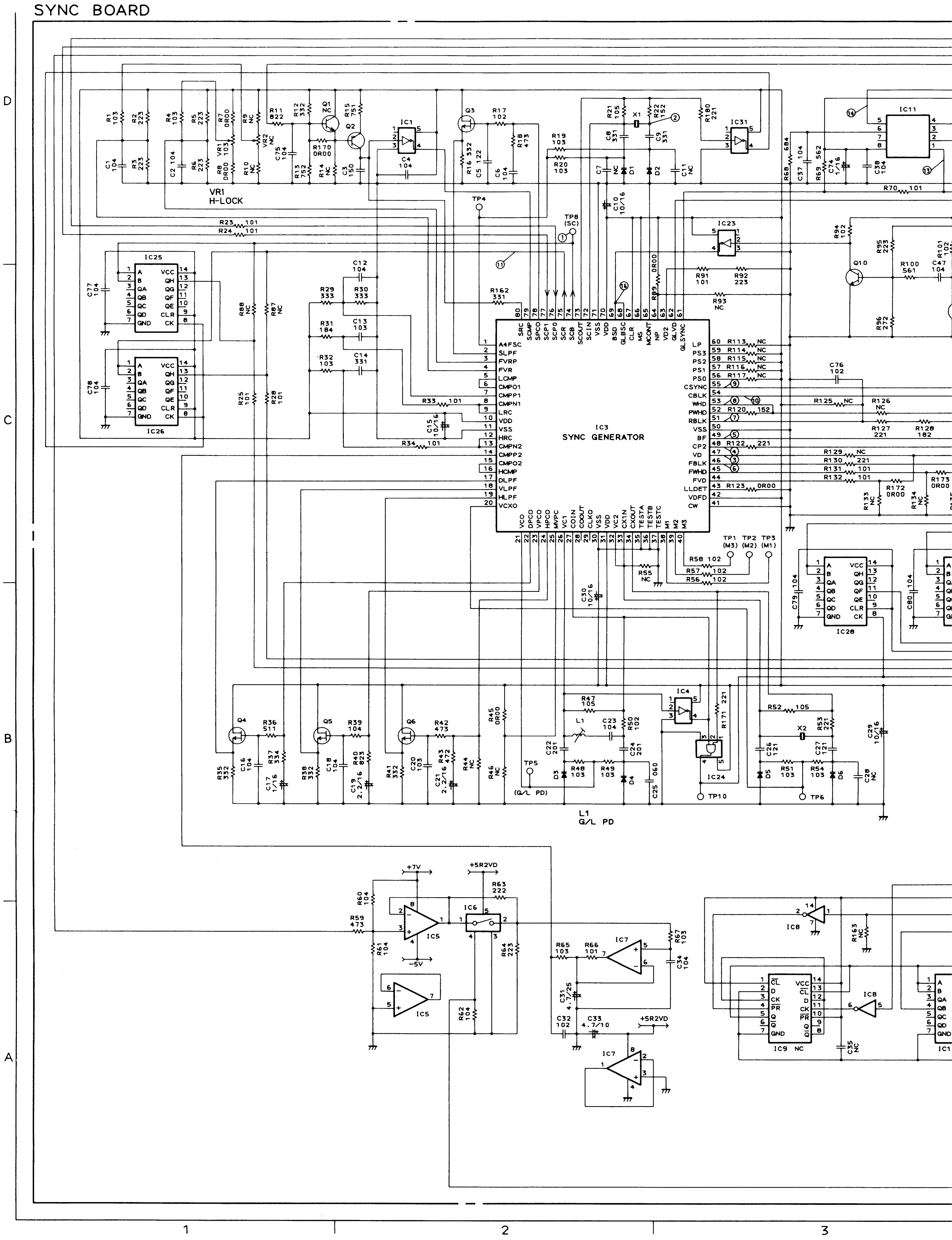


15. 20µsec/DIV 0.5V/DIV



16. 0.1µsec/DIV 1V/DIV





< Index>
SYNC BOARD

IC1	D2	Q2	D2
IC3	C2	Q3	D2
IC4	B3	Q4	B1
IC5	A2	Q5	B1
IC6	A2	Q6	B2
IC7	A2	Q7	D4
IC8	A3,A5,C6	Q8	D4
IC11	D3	Q9	D5
IC12	D4	Q10	C3
IC13	C5	Q13	C3
IC14	C5,C6	Q15	C5
IC15	C6	Q16	C5
IC23	D3	Q17	C5
IC24	B3	D1	D2
IC25	C1	D2	D2
IC26	C1	D3	B2
IC27	B4,C4	D4	B2
IC28	B3	D5	B3
IC29	B3	D6	B3
IC30	B4	D8	C6
IC31	D3		

SYNC BOARD

	IC1	IC4	IC5	IC13
Pin 1	-	1.3	3.1	2.7
2	0.4	0	3.1	2.7
3	0	0	3.1	0
4	5.0	5.0	-5.2	6.3
5	5.0	5.0	0	6.7
6			0	
7			0	
8			7.0	

	IC3
Pin 1	2.5
2	0.5
3	2.5
4	2.5
5	5.0
6	5.0
7	2.5
8	0
9	0
10	5.0
11	0
12	0.2
13	0.2
14	2.8
15	4.9
16	4.9
17	-
18	0.4
19	4.8
20	-

	IC3
Pin 41	0
42	5.0
43	0
44	0.2
45	0.8
46	1.2
47	0.2
48	0.2
49	0.2
50	0
51	1.1
52	0.7
53	0.7
54	1.2
55	4.6
56	4.9
57	4.9
58	4.9
59	4.9
60	0

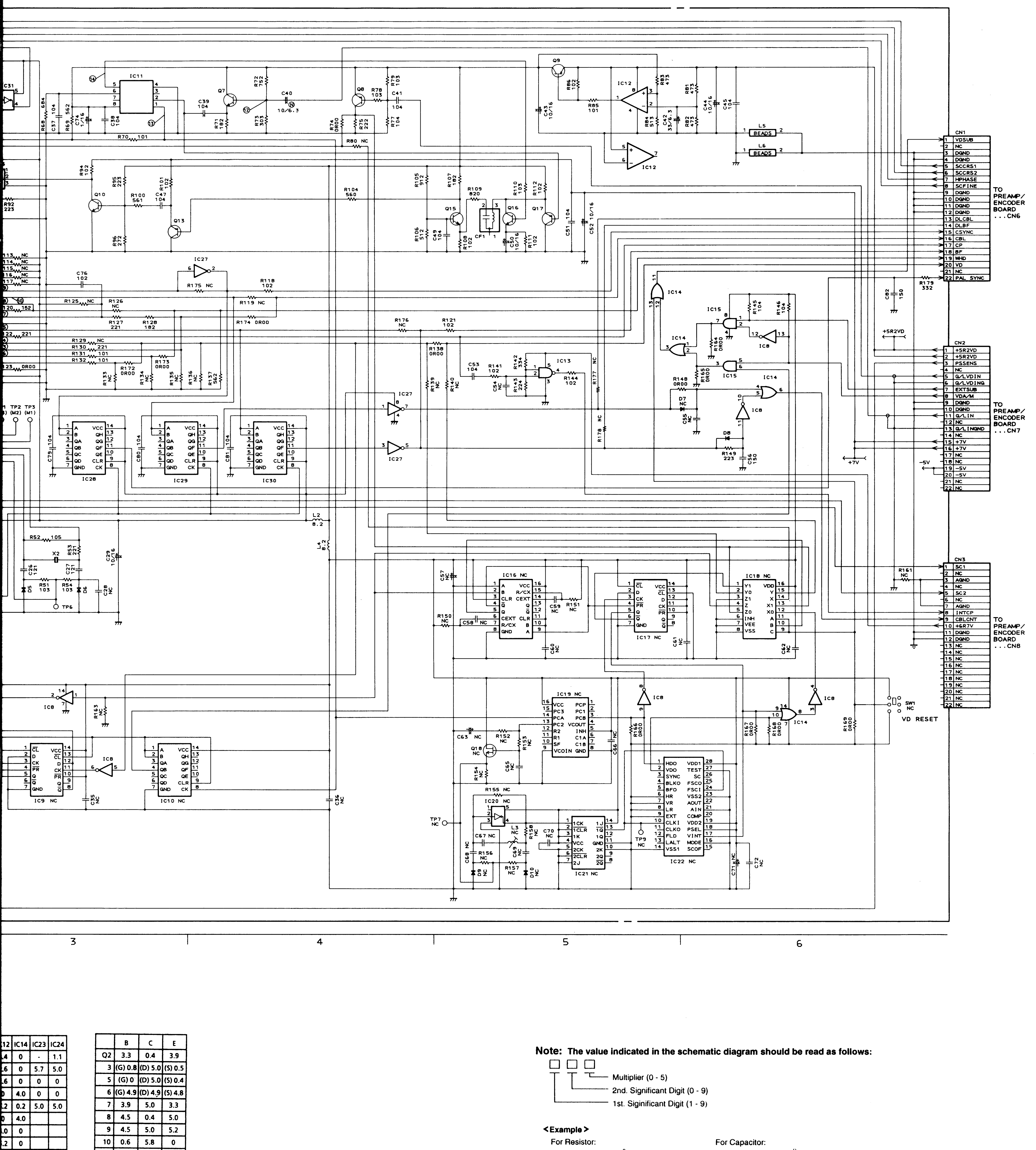
	IC3
21	·
22	0
23	0
24	5.0
25	5.0
26	0
27	5.0
28	0
29	2.4
30	0
31	5.0
32	0
33	0
34	5.0
35	0
36	0
37	0
38	0
39	0
40	0

	IC3
61	0.2
62	0.4
63	0
64	0
65	0
66	5.0
67	5.0
68	0
69	0
70	5.0
71	0
72	2.4
73	2.6
74	2.4
75	2.4
76	5.0
77	0
78	-
79	5.0
80	0

	IC6	IC7	IC8	IC11	IC12	IC14	IC23	IC24
Pin 1	3.1	4.5	0	0.1	4.4	0	-	1.1
2	2.8	4.5	5.0	1.5	2.6	0	5.7	5.0
3	0	0	0	0	2.6	0	0	0
4	0	0	5.0	0	0	4.0	0	0
5	5.2	2.8	0.2	3.9	5.2	0.2	5.0	5.0
6		2.8	4.8	1.3	0	4.0		
7		2.8	0	5.0	4.0	0		
8		5.2	5.0	5.0	5.2	0		
9			0			0		
10			0.2			0		
11			4.1			0		
12			0			0		
13			4.9			0		
14			5.0			5.0		

	B	C
Q2	3.3	0.4
3	(G) 0.8	(D) 5.0
5	(G) 0	(D) 5.0
6	(G) 4.9	(D) 4.9
7	3.9	5.0
8	4.5	0.4
9	4.5	5.0
10	0.6	5.8
13	1.9	2.1
15	1.7	3.2
16	2.8	2.2
17	1.5	0

M OF SYNC BOARD (WV-E550E)


IC8
IC9 NC
IC10 NC
IC11
IC12
IC13
IC14
IC15
IC16 NC
IC17 NC
IC18 NC
IC19 NC
IC20 NC
IC21 NC
IC22 NC
IC27
IC28
IC29
IC30
Q7
Q8
Q9
Q10
Q13
Q15
Q16
Q17
Q18
CF1
X2
D5
D6
D7
D8
D9
D10
L2 8.2
L4 8.2
L5 BEADS
L6 BEADS
TP2 (M2)
TP3 (M1)
TP6
TP7 NC
TP9 NC
R68 684
C37 104
R69 562
C74 1/16
C38 104
R70 101
C39 104
R71 182
R72 752
R73 303
C40 10/6.3
R74 0R00
R75 222
R78 103
R77 104
R79 103
C41 104
R80 NC
C43 10/16
R86 102
R85 101
R84 513
C42 33/6.3
R83 473
R82 473
R81 473
C44 10/16
C45 104
R94 102
R95 223
R96 272
R100 561
R101 102
C47 104
R104 560
R105 912
R106 512
R107 182
R108 102
R109 820
C49 104
C50 10/16
R110 103
R111 102
R112 102
C51 104
C52 10/16
C76 102
R175 NC
R118 102
R119 NC
R174 0R00
R125 NC
R126 NC
R127 221
R128 182
R129 NC
R130 221
R131 101
R132 101
R133 NC
R134 NC
R135 NC
R136 NC
R137 562
R172 0R00
R173 0R00
R176 NC
R121 102
R138 0R00
R139 NC
R140 NC
C53 104
R141 102
C54 NC
R142 334
R143 224
R144 102
R177 NC
R178 NC
R145 104
R146 104
R164 0R00
R148 0R00
R165 0R00
C55 NC
R149 223
C56 150
C79 104
C80 104
C81 104
R52 105
R53 221
R51 103
R54 103
C26 121
C27 121
C28 NC
C29 10/16
R163 NC
C35 NC
C36 NC
C57 NC
R150 NC
C58 NC
C59 NC
R151 NC
C60 NC
C61 NC
C62 NC
C63 NC
R152 NC
R153 NC
R154 NC
C65 NC
C66 NC
R155 NC
C67 NC
C68 NC
R156 NC
R157 NC
L3 NC
C69 NC
R158 NC
C70 NC
R166 0R00
R167 0R00
R168 0R00
R169 0R00
C71 NC
C72 NC
C82 150
R179 332
+5R2VD
+7V
-5V
R161 NC
SW1 NC
VD RESET
CN1
1 VDSUB
2 NC
3 DGND
4 DGND
5 SCCRS1
6 SCCRS2
7 HPHASE
8 SCFINE
9 DGND
10 DGND
11 DGND
12 DGND
13 DLCBL
14 DLBF
15 CSYNC
16 CBL
17 CP
18 BF
19 WHD
20 VD
21 NC
22 PAL SYNC
TO PREAMP/ ENCODER BOARD ...CN6
CN2
1 +5R2VD
2 +5R2VD
3 PSSENS
4 NC
5 G/LVDIN
6 G/LVDING
7 EXTSUB
8 VDA/M
9 DGND
10 DGND
11 G/LIN
12 NC
13 G/LINGND
14 NC
15 +7V
16 +7V
17 NC
18 NC
19 -5V
20 -5V
21 NC
22 NC
TO PREAMP/ ENCODER BOARD ...CN7
CN3
1 SC1
2 NC
3 AGND
4 NC
5 SC2
6 NC
7 AGND
8 INTCP
9 CBLCNT
10 +6R7V
11 DGND
12 DGND
13 NC
14 NC
15 NC
16 NC
17 NC
18 NC
19 NC
20 NC
21 NC
22 NC
TO PREAMP/ ENCODER BOARD ...CN8
HDO VDD1 VDO TEST SYNC SC BLKO FSCO BFO FSCI HR VSS2 VR AOUT LR AIN EXT COMP CLKI VDD2 CLKO PSEL FLD VINT LALT MODE VSS1 SCOF
VCC PCP PC3 PC1 PCA PCB PC2 VCOUT R2 INH R1 C1A SF C1B VCOIN GND
A B QA QB QC QD GND VCC QH QG QF QE CLR CK
CL D CK PR Q Q̄ GND VCC
3
4
5
6

12	IC14	IC23	IC24
.4	0	-	1.1
.6	0	5.7	5.0
.6	0	0	0
0	4.0	0	0
.2	0.2	5.0	5.0
0	4.0		
.0	0		
.2	0		
	0		
	0		
	0		
	0		
	0		
	5.0		

	B	C	E
Q2	3.3	0.4	3.9
3	(G) 0.8	(D) 5.0	(S) 0.5
5	(G) 0	(D) 5.0	(S) 0.4
6	(G) 4.9	(D) 4.9	(S) 4.8
7	3.9	5.0	3.3
8	4.5	0.4	5.0
9	4.5	5.0	5.2
10	0.6	5.8	0
13	1.9	2.1	3.9
15	1.7	3.2	1.0
16	2.8	2.2	0.9
17	1.5	0	2.2

Note: The value indicated in the schematic diagram should be read as follows:

☐ ☐ ☐

- Multiplier (0 - 5)
- 2nd. Significant Digit (0 - 9)
- 1st. Significant Digit (1 - 9)

<Example>

For Resistor:

330 → 33 x 10^0 = 33 Ω
561 → 56 x 10^1 = 560 Ω
123 → 12 x 10^3 = 12k Ω
0R00 = 0 Ω

For Capacitor:

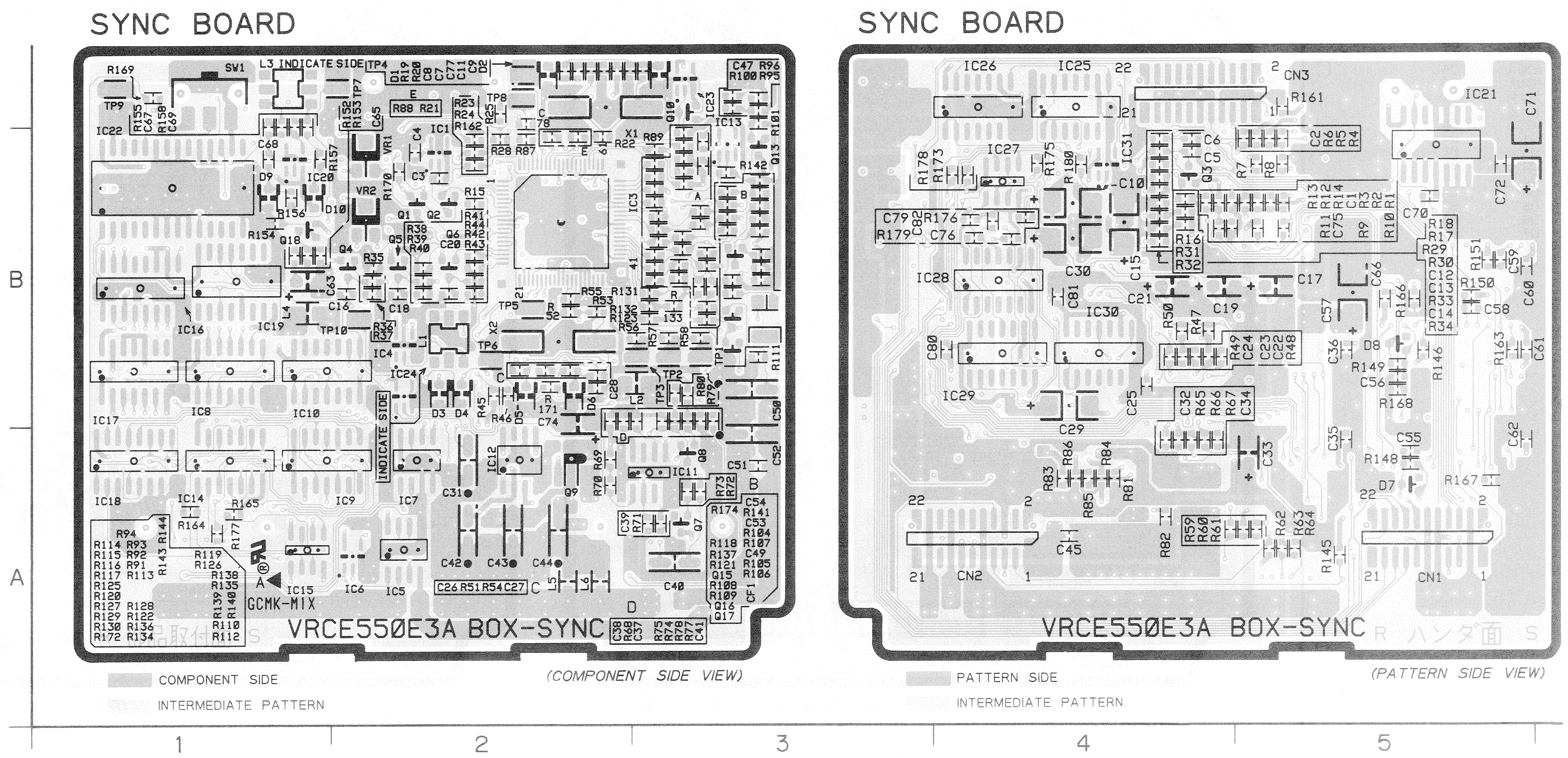
820 → 82 x 10^0 = 82 pF
102 → 10 x 10^2 = 1000 pF = 0.001 μF
104 → 10 x 10^4 = 100000 pF = 0.1 μF
The suffix attached to capacitance indicates a type of capacitor.

CONDUCTOR VIEW OF SYNC BOARD (WV-E550E)

< Index>

SYNC BOARD

IC1	B2
IC3	B2
IC4	B2
IC5	A2
IC6	A2
IC7	A2
IC8	B1
IC11	A3
IC12	A2
IC13	B3
IC14	A1
IC15	A1
IC23	C3
IC24	B2
IC25	C4
IC26	C4
IC27	B4
IC28	B4
IC29	B4
IC30	B4
IC31	B4
Q2	B2
Q3	B4
Q4	B2
Q5	B2
Q6	B2
Q7	A3
Q8	A3
Q9	A2
Q10	C3
Q13	B3
Q15	B3
Q16	B3
Q17	B3
D1	C2
D2	C3
D3	B2
D4	B2
D5	B2
D6	B2
D8	B5

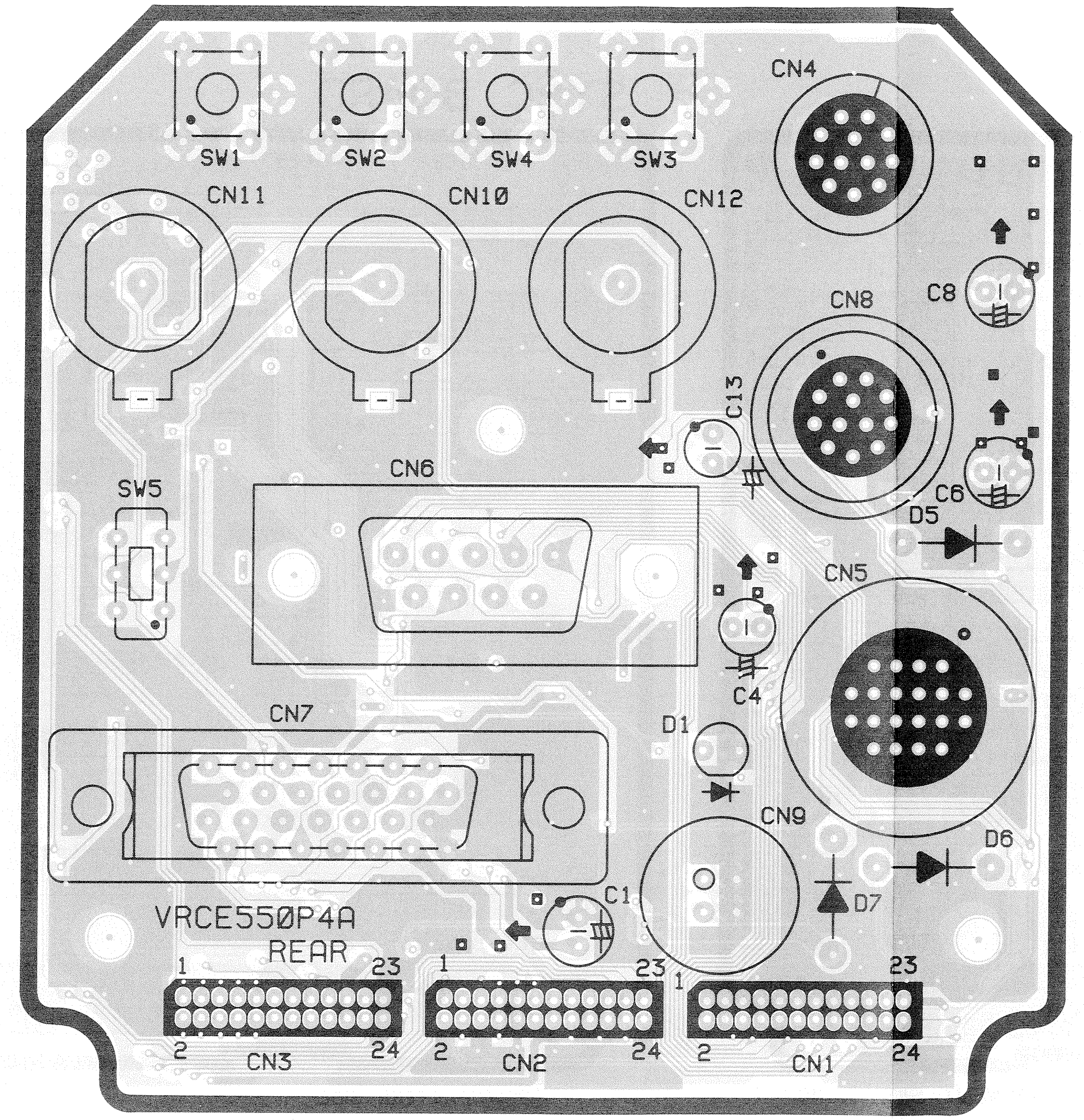

SYNC BOARD
SYNC BOARD
B
A
1
2
3
4
5
VRCE550E3A BOX-SYNC
VRCE550E3A BOX-SYNC
COMPONENT SIDE
INTERMEDIATE PATTERN
(COMPONENT SIDE VIEW)
PATTERN SIDE
INTERMEDIATE PATTERN
(PATTERN SIDE VIEW)
L3 INDICATE SIDE
INDICATE SIDE
GCMK-MIX
SW1
IC1
IC3
IC4
IC5
IC6
IC7
IC8
IC9
IC10
IC11
IC12
IC13
IC14
IC15
IC16
IC17
IC18
IC19
IC20
IC21
IC22
IC23
IC24
IC25
IC26
IC27
IC28
IC29
IC30
IC31
CN1
CN2
CN3
X1
X2
VR1
VR2
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TP9
TP10
CF1

CONDUCTOR VIEW OF REAR BOARD (WV-E550E)

< Index>
REAR BOARD

IC1	B5
IC2	A4
IC5	B4
IC6	B5
IC7	B5
IC8	B5
IC9	C5
IC10	C5
IC11	C5
IC12	C5
IC13	C5
Q1	B4
D1	B2
D2	B5
D3	B4
D4	C4
D5	B3
D6	A3
D7	A3
D8	B3
D9	B3

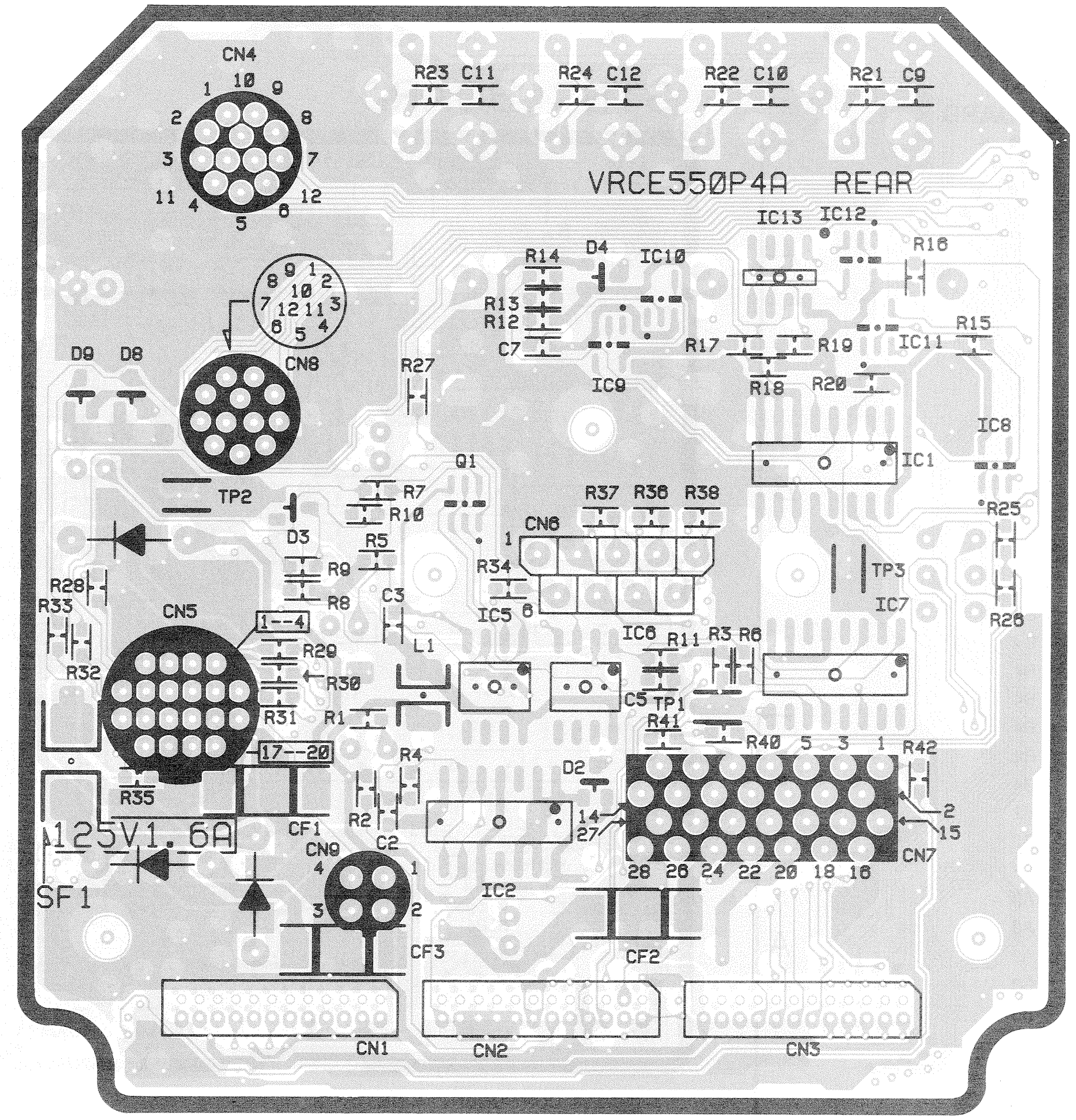
REAR BOARD


C
B
A
SW1
SW2
SW4
SW3
CN4
CN11
CN10
CN12
CN8
C8
C13
C6
D5
SW5
CN6
CN5
C4
CN7
D1
CN9
D6
D7
C1
VRCE550P4A
REAR
CN3
CN2
CN1
1
2
23
24

COMPONENT SIDE
INTERMEDIATE PATTERN

(COMPONENT SIDE VIEW)

REAR BOARD

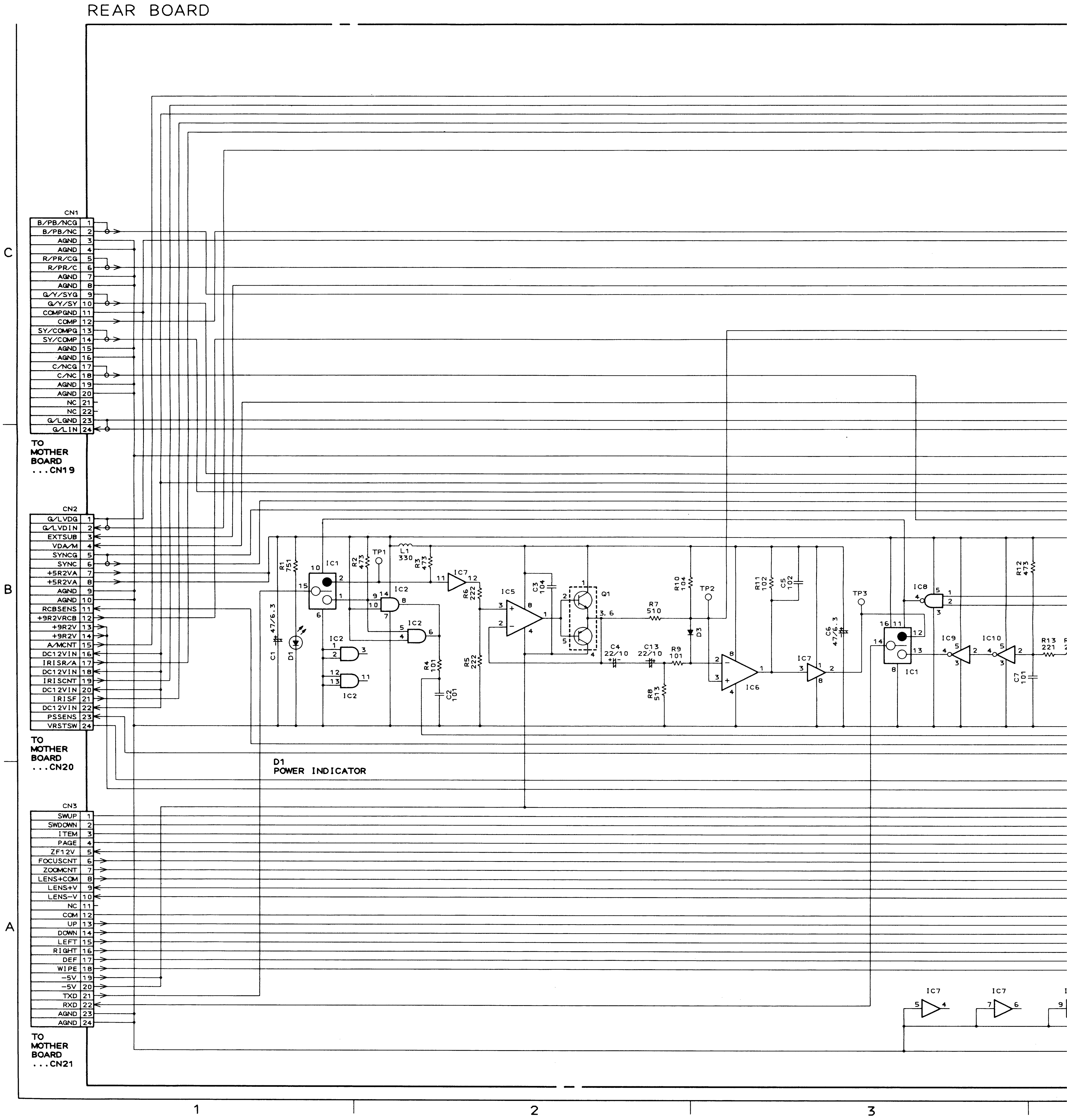

CN4
R23 C11
R24 C12
R22 C10
R21 C9
VRCE550P4A REAR
IC13 IC12
R16
R14
D4
IC10
R13
R12
C7
R17
R19
IC11
R15
R18
R20
CN8
D9 D8
R27
IC9
IC8
IC1
Q1
R7
R10
TP2
D3
R5
R37 R36 R38
CN6
R25
R34
TP3
IC7
R28
R33
CN5
R9
R8
C3
IC5
IC6
R11
R3 R6
R26
R29
R30
R32
L1
C5
TP1
R31
R1
R41
R40
R42
R4
D2
R35
CF1
R2
CN9
C2
A125V1.6A
SF1
IC2
CN7
CF3
CF2
CN1
CN2
CN3

PATTERN SIDE
INTERMEDIATE PATTERN

(PATTERN SIDE VIEW)

1 2 3 4 5

SCHEMATIC DIAGRAM OF REAR


REAR BOARD
C
B
A
1
2
3
CN1
B/PB/NCG 1
B/PB/NC 2
AGND 3
AGND 4
R/PR/CG 5
R/PR/C 6
AGND 7
AGND 8
G/Y/SYG 9
G/Y/SY 10
COMPGND 11
COMP 12
SY/COMPG 13
SY/COMP 14
AGND 15
AGND 16
C/NCG 17
C/NC 18
AGND 19
AGND 20
NC 21
NC 22
G/LGND 23
G/LIN 24
TO MOTHER BOARD ...CN19
CN2
G/LVDG 1
G/LVDIN 2
EXTSUB 3
VDA/M 4
SYNCG 5
SYNC 6
+5R2VA 7
+5R2VA 8
AGND 9
AGND 10
RCBSENS 11
+9R2VRCB 12
+9R2V 13
+9R2V 14
A/MCNT 15
DC12VIN 16
IRISR/A 17
DC12VIN 18
IRISCNT 19
DC12VIN 20
IRISF 21
DC12VIN 22
PSSENS 23
VRSTSW 24
TO MOTHER BOARD ...CN20
CN3
SWUP 1
SWDOWN 2
ITEM 3
PAGE 4
ZF12V 5
FOCUSCNT 6
ZOOMCNT 7
LENS+COM 8
LENS+V 9
LENS−V 10
NC 11
COM 12
UP 13
DOWN 14
LEFT 15
RIGHT 16
DEF 17
WIPE 18
−5V 19
−5V 20
TXD 21
RXD 22
AGND 23
AGND 24
TO MOTHER BOARD ...CN21
D1 POWER INDICATOR
C1 47/6.3
D1
R1 751
IC1
R2 473
TP1
L1 330
R3 473
IC7
R6 222
IC2
R4 101
C2 101
IC5
R5 222
C3 104
Q1
R7 510
C4 22/10
C13 22/10
R9 101
R8 513
R10 104
D3
TP2
IC6
R11 102
C5 102
C6 47/6.3
TP3
IC8
IC9
IC10
R12 473
R13 221
C7 101

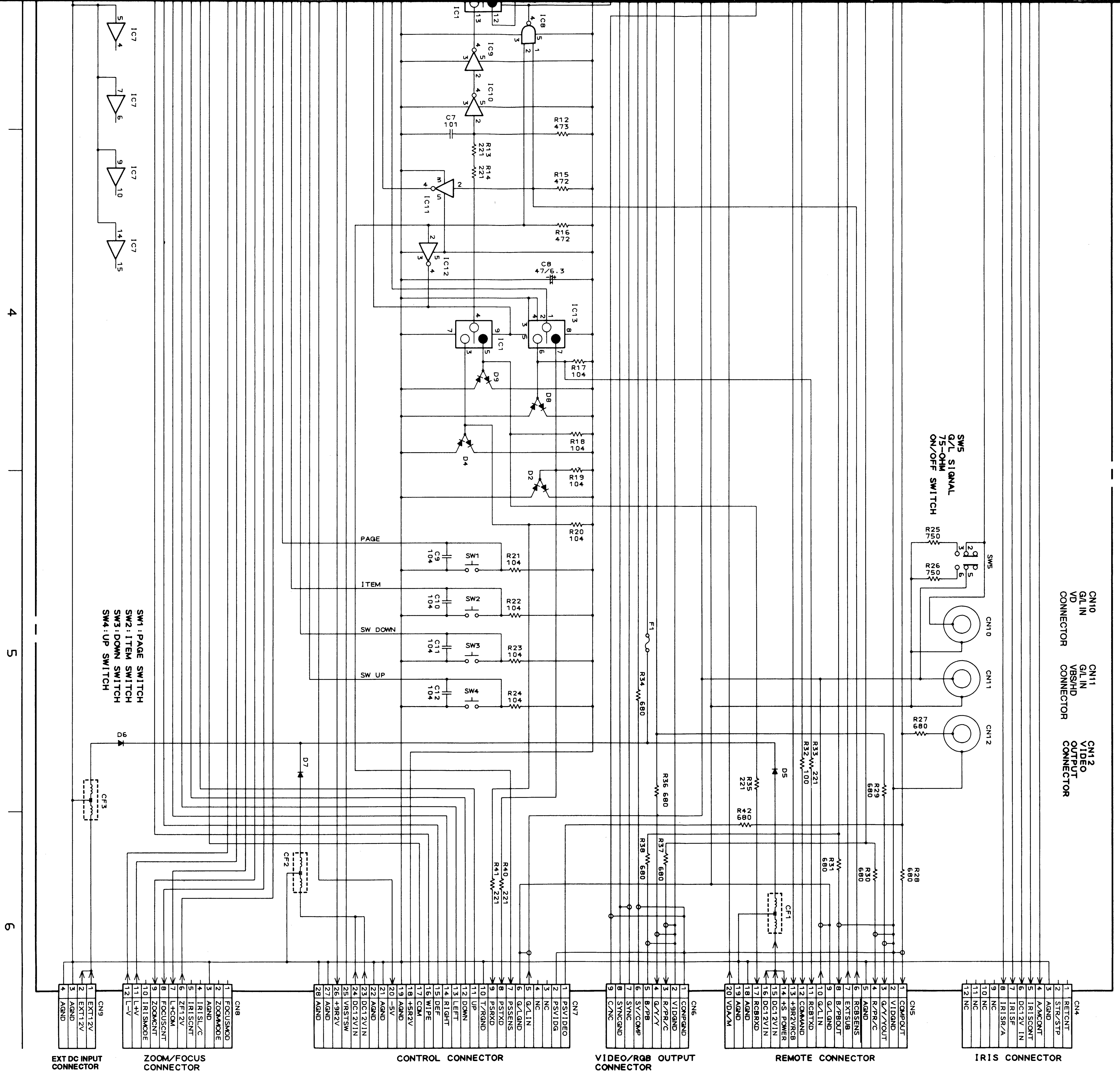
< Index>
REAR BOARD

IC1	B1, B3, B4
IC2	B1, B2
IC5	B2
IC6	B3
IC7	A3,A4,B2,B3
IC8	B3
IC9	B3
IC10	B3
IC11	B4
IC12	B4
IC13	B4
Q1	B2
D1	B1
D2	B5
D3	B3
D4	B4
D5	C5
D6	A5
D7	A5
D8	B4
D9	B4

REAR BOARD

	IC1	IC2	IC5	IC6	IC7	IC8	IC9	IC10	IC11	IC12	IC13
Pin 1	5.2	0	3.0	5.2	5.2	-	-	-	-	-	5.2
2	5.0	0	2.5	2.0	5.2	5.2	0	5.2	5.2	5.2	0
3	5.1	0	2.5	2.5	5.2	0	0	0	0	0	-
4	5.0	5.2	-5.2	0	0	0	5.2	0	0	0	0
5	5.2	5.2	-	-	0	5.2	5.2	5.2	5.2	5.2	0
6	0	5.2	-	-	0						5.1
7	0	0	4.7	0	0						5.2
8	0	5.2	5.2	5.2	0						5.2
9	0	5.2			0						
10	0	5.2			0						
11	0	0			5.0						
12	5.2	0			4.9						
13	5.2	0			-						
14	5.2	5.2			0						
15	5.0				0						
16	5.2				-						

M OF REAR BOARD (WV-E550E)


IC1
IC7
IC8
IC9
IC10
IC11
IC12
IC13
C7 101
C8 47/6.3
R12 473
R13 221
R14 221
R15 472
R16 472
R17 104
R18 104
R19 104
R20 104
D2
D4
D8
D9
PAGE
ITEM
SW DOWN
SW UP
SW1
SW2
SW3
SW4
C9 104
C10 104
C11 104
C12 104
R21 104
R22 104
R23 104
R24 104
SW1:PAGE SWITCH
SW2:ITEM SWITCH
SW3:DOWN SWITCH
SW4:UP SWITCH
SW5 G/L SIGNAL 75-OHM ON/OFF SWITCH
R25 750
R26 750
SW5
CN10 G/L IN VD CONNECTOR
CN11 G/L IN VBS/HD CONNECTOR
CN12 VIDEO OUTPUT CONNECTOR
R27 680
F1
R34 680
D5
D6
D7
CF1
CF2
CF3
R28 680
R29 680
R30 680
R31 680
R32 100
R33 221
R35 221
R36 680
R37 680
R38 680
R40 221
R41 221
R42 680
4
5
6
CN9
1 EXT12V
2 EXT12V
3 AGND
4 AGND
EXT DC INPUT CONNECTOR
CN8
1 FOCUSMOD
2 ZOOMMODE
3 AGND
4 IRISL/C
5 IRISCNT
6 ZF12V
7 L-COM
8 FOCUSCNT
9 ZOOMCNT
10 IRISMODE
11 L+V
12 L-V
ZOOM/FOCUS CONNECTOR
CN7
1 PSVIDEO
2 PSVIDG
3 NC
4 NC
5 G/LIN
6 G/LGND
7 PSSENS
8 PSTXD
9 PSRXD
10 T/RGND
11 UP
12 DOWN
13 LEFT
14 RIGHT
15 DEF
16 WIPE
17 COM
18 +5R2V
19 AGND
20 -5V
21 AGND
22 AGND
23 DC12VIN
24 DC12VIN
25 VRSTSW
26 +9R2V
27 AGND
28 AGND
CONTROL CONNECTOR
CN6
1 COMPGND
2 VIDGND
3 R/PR/C
4 G/Y/Y
5 B/PB
6 SY/COMP
7 SYNC
8 SYNCGND
9 C/NC
VIDEO/RGB OUTPUT CONNECTOR
CN5
1 COMPOUT
2 VIDGND
3 Y/Y/OUT
4 R/PR/C
5 AGND
6 RCBSENS
7 EXTSUB
8 B/PBOUT
9 G/LGND
10 G/LIN
11 RCBTXD
12 COMMAND
13 +9R2VRCB
14 +5 POWER
15 DC12VIN
16 DC12VIN
17 RCBRXD
18 AGND
19 AGND
20 VD/A/M
REMOTE CONNECTOR
CN4
1 RETCNT
2 STR/STP
3 AGND
4 A/MCONT
5 IRISCONT
6 DC12V IN
7 IRISF
8 IRISR/A
9 NC
10 NC
11 NC
12 NC
IRIS CONNECTOR

SCHEMATIC DIAGRAM OF POW

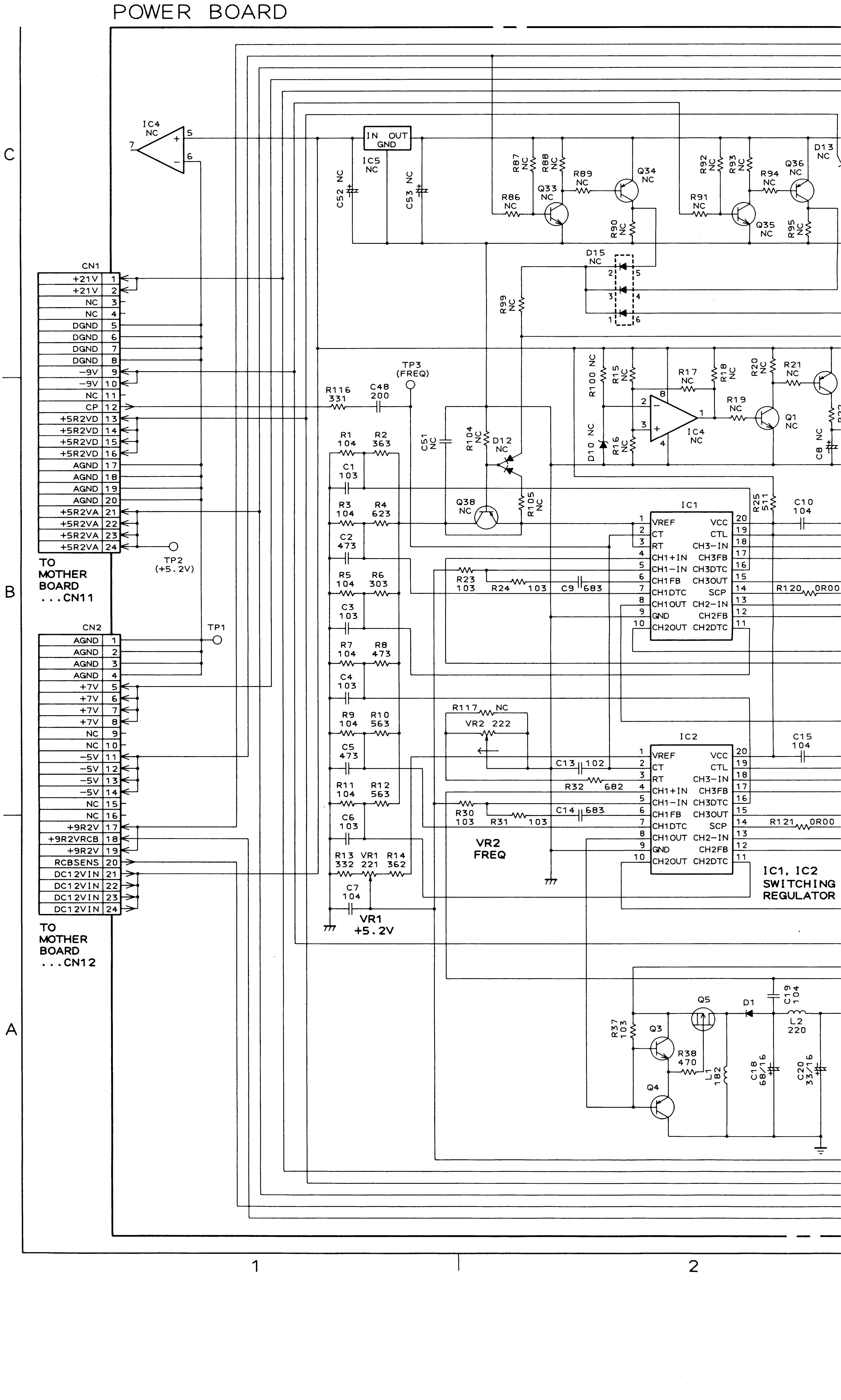
< Index>
POWER BOARD

IC1	B2
IC2	B2
IC3	A4, B4
Q3	A2
Q4	A2
Q5	A2
Q6	B3
Q7	B3
Q8	C3
Q9	C4
Q10	B4
Q11	B3
Q12	B3
Q13	B3
Q14	B4
Q15	B4
Q16	B4
Q17	B4
Q18	B3
Q19	B3
Q20	B3
Q21	A3
Q22	A3
Q23	A3
Q24	A3
Q25	A4
Q26	A4
Q27	A4
Q28	A3
Q29	A3
Q30	A4
Q31	A4
Q39	A3
D1	A2
D2	B3
D3	B3
D4	B3
D5	A4
D6	A3
D8	A4
D9	A3

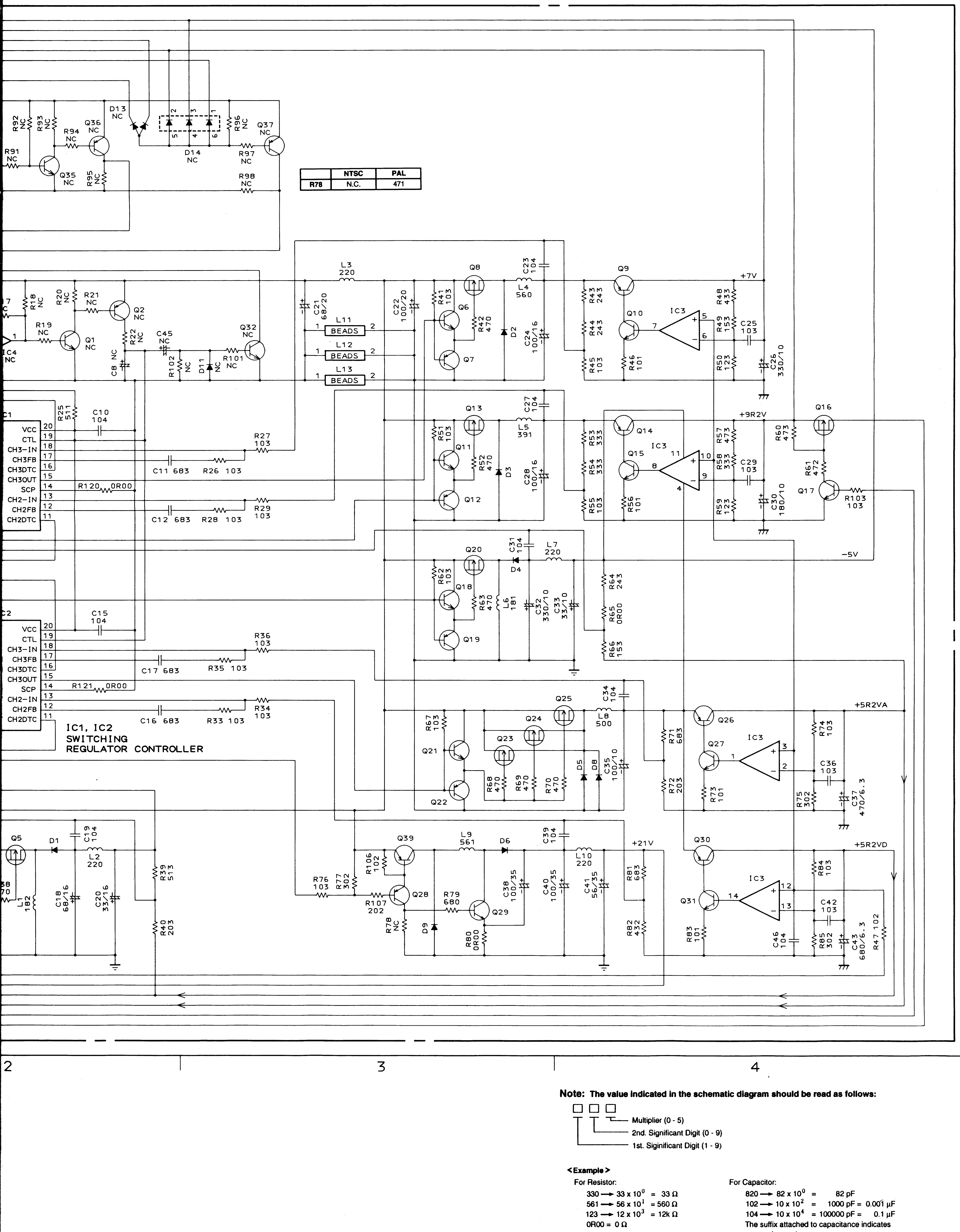
POWER BOARD

	IC1	IC2	IC3
Pin 1	2.5	2.5	0.7
2	1.6	1.6	1.2
3	2.5	1.3	1.2
4	1.2	1.2	5.5
5	1.2	1.2	1.2
6	1.4	1.5	1.2
7	1.5	1.6	0.6
8	9.4	10.2	0.3
9	0	0	1.2
10	9.0	7.9	1.2
11	1.9	1.7	-5.2
12	1.8	1.4	1.2
13	1.2	1.3	1.2
14	0	0	0.8
15	8.7	8.4	
16	1.8	1.7	
17	1.7	1.6	
18	1.2	1.3	
19	10.9	10.9	
20	9.0	9.0	

	B	C	E
Q3	10.2	11.4	6.8
4	10.3	0	6.8
5	(G) 7.2	(D) 0	(S) 11.4
6	8.7	11.4	4.5
7	8.7	0	4.5
8	(G) 5.5	(D) 7.3	(S) 11.4
9	(G) 7.3	(D) 7.0	(S) 6.6
10	0.6	6.6	0.1
11	9.1	11.4	2.7
12	9.1	0	2.7
13	(G) 3.5	(D) 9.5	(S) 11.4
14	(G) 9.5	(D) 9.2	(S) 8.9
15	0.3	8.9	0.4
16	(G) 9.2	(D) -	(S) 9.2
17	0	9.2	0
18	9.5	11.4	8.0
19	9.6	0	8.0
20	(G) 8.3	(D) -	(S) 11.4
21	8.4	11.4	6.1
22	8.4	0	6.1
23	(G) 6.2	(D) 5.6	(S) 11.4
24	(G) 6.2	(D) 5.6	(S) 11.4
25	(G) 6.2	(D) 5.6	(S) 11.4
26	(G) 4.9	(D) 5.2	(S) 5.5
27	0.6	4.9	0.1
29	(G) 0.8	(D) 11.4	(S) 0.6
30	(G) 4.9	(D) 5.2	(S) 5.5
31	0.8	4.5	0.2
33	0.2	11.4	0
34	-2.4	11.4	0
35	0.6	0	0
36	0	11.4	0
37	0.6	0	0
38	0	11.4	0
39	0.6	0	0
40	0	11.4	0
41	0.6	0	0
42	0	11.4	0
43	0	0	0.7
44	0	11.4	0


POWER BOARD
C
B
A
1
2
CN1
+21V 1
+21V 2
NC 3
NC 4
DGND 5
DGND 6
DGND 7
DGND 8
-9V 9
-9V 10
NC 11
CP 12
+5R2VD 13
+5R2VD 14
+5R2VD 15
+5R2VD 16
AGND 17
AGND 18
AGND 19
AGND 20
+5R2VA 21
+5R2VA 22
+5R2VA 23
+5R2VA 24
TO MOTHER BOARD ...CN11
TP2 (+5.2V)
CN2
AGND 1
AGND 2
AGND 3
AGND 4
+7V 5
+7V 6
+7V 7
+7V 8
NC 9
NC 10
-5V 11
-5V 12
-5V 13
-5V 14
NC 15
NC 16
+9R2V 17
+9R2VRCB 18
+9R2V 19
RCBSENS 20
DC12VIN 21
DC12VIN 22
DC12VIN 23
DC12VIN 24
TO MOTHER BOARD ...CN12
TP1
IC4 NC
IC5 NC
IN OUT GND
C52 NC
C53 NC
R86 NC
R87 NC
R88 NC
R89 NC
Q33 NC
Q34 NC
R90 NC
R91 NC
R92 NC
R93 NC
R94 NC
Q35 NC
Q36 NC
R95 NC
D13 NC
D15 NC
R99 NC
TP3 (FREQ)
R116 331
C48 200
C51 NC
R104 NC
D12 NC
Q38 NC
R105 NC
R100 NC
R15 NC
R16 NC
D10 NC
R17 NC
R18 NC
R19 NC
R20 NC
R21 NC
Q1 NC
C8 NC
R1 104
R2 363
C1 103
R3 104
R4 623
C2 473
R5 104
R6 303
C3 103
R7 104
R8 473
C4 103
R9 104
R10 563
C5 473
R11 104
R12 563
C6 103
R13 332
VR1 221
R14 362
C7 104
VR1 +5.2V
R117 NC
VR2 222
VR2 FREQ
R23 103
R24 103
C9 683
R30 103
R31 103
C13 102
R32 682
C14 683
R25 511
C10 104
C15 104
R120 0R00
R121 0R00
IC1
IC2
VREF
CT
RT
CH1+IN
CH1-IN
CH1FB
CH1DTC
CH1OUT
GND
CH2OUT
VCC
CTL
CH3-IN
CH3FB
CH3DTC
CH3OUT
SCP
CH2-IN
CH2FB
CH2DTC
IC1, IC2 SWITCHING REGULATOR
R37 103
Q3
Q4
Q5
R38 470
L1 182
D1
C19 104
L2 220
C18 68/16
C20 33/16

RAM OF POWER BOARD (WV-E550E)



IC1, IC2
SWITCHING
REGULATOR CONTROLLER
VCC
CTL
CH3-IN
CH3FB
CH3DTC
CH3OUT
SCP
CH2-IN
CH2FB
CH2DTC
R78 NTSC N.C. PAL 471
D13 NC
D14 NC
Q35 NC
Q36 NC
Q37 NC
Q1 NC
Q2 NC
Q32 NC
IC4 NC
R25 511
C10 104
C15 104
R120 0R00
R121 0R00
C11 683
R26 103
R27 103
C12 683
R28 103
R29 103
C17 683
R35 103
R36 103
C16 683
R33 103
R34 103
L3 220
C21 68/20
L11 BEADS
L12 BEADS
L13 BEADS
C22 100/20
Q8
Q6
Q7
R41 103
R42 470
D2
L4 560
C23 104
C24 100/16
Q9
Q10
IC3
R43 243
R44 243
R45 103
R46 101
R48 433
R49 153
R50 123
C25 103
C26 330/10
+7V
Q13
Q11
Q12
R51 103
R52 470
D3
L5 391
C27 104
C28 100/16
Q14
Q15
R53 333
R54 333
R55 103
R56 101
R57 473
R58 333
R59 123
C29 103
C30 180/10
+9R2V
Q16
Q17
R60 473
R61 472
R103 103
-5V
Q20
Q18
Q19
R62 103
R63 470
D4
C31 104
L6 181
L7 220
C32 330/10
C33 33/10
R64 243
R65 0R00
R66 153
Q25
Q24
Q23
Q21
Q22
R67 103
R68 470
R69 470
R70 470
D5
D8
C34 104
L8 500
C35 100/10
Q26
Q27
R71 683
R72 203
R73 101
R74 103
R75 302
C36 103
C37 470/6.3
+5R2VA
Q5
D1
C19 104
L2 220
L1 182
C18 68/16
C20 33/16
R39 513
R40 203
Q39
Q28
Q29
R76 103
R77 302
R106 102
R107 202
R78 NC
D9
R79 680
R80 0R00
L9 561
D6
C38 100/35
C39 104
C40 100/35
L10 220
C41 56/35
+21V
R81 683
R82 432
Q30
Q31
R83 101
R84 103
R85 302
C42 103
C43 680/6.3
C46 104
R47 102
+5R2VD
2
3
4

Note: The value indicated in the schematic diagram should be read as follows:

□ □ □
Multiplier (0 - 5)
2nd. Significant Digit (0 - 9)
1st. Siginificant Digit (1 - 9)

<Example>

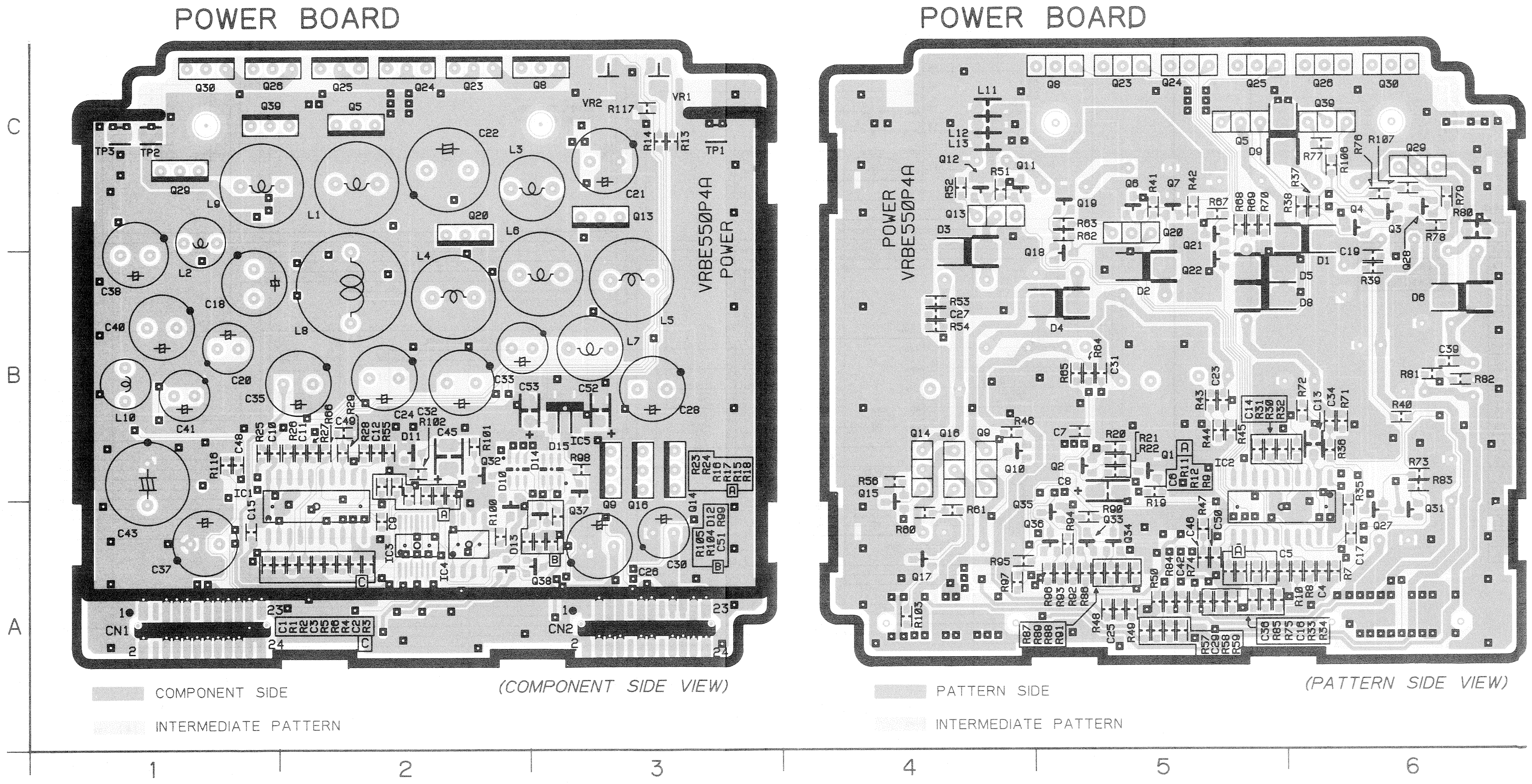
For Resistor:
330 → 33 x 10^0 = 33 Ω
561 → 56 x 10^1 = 560 Ω
123 → 12 x 10^3 = 12k Ω
0R00 = 0 Ω

For Capacitor:
820 → 82 x 10^0 = 82 pF
102 → 10 x 10^2 = 1000 pF = 0.001 μF
104 → 10 x 10^4 = 100000 pF = 0.1 μF
The suffix attached to capacitance indicates a type of capacitor.

CONDUCTOR VIEW OF POWER BOARD (WV-E550E)

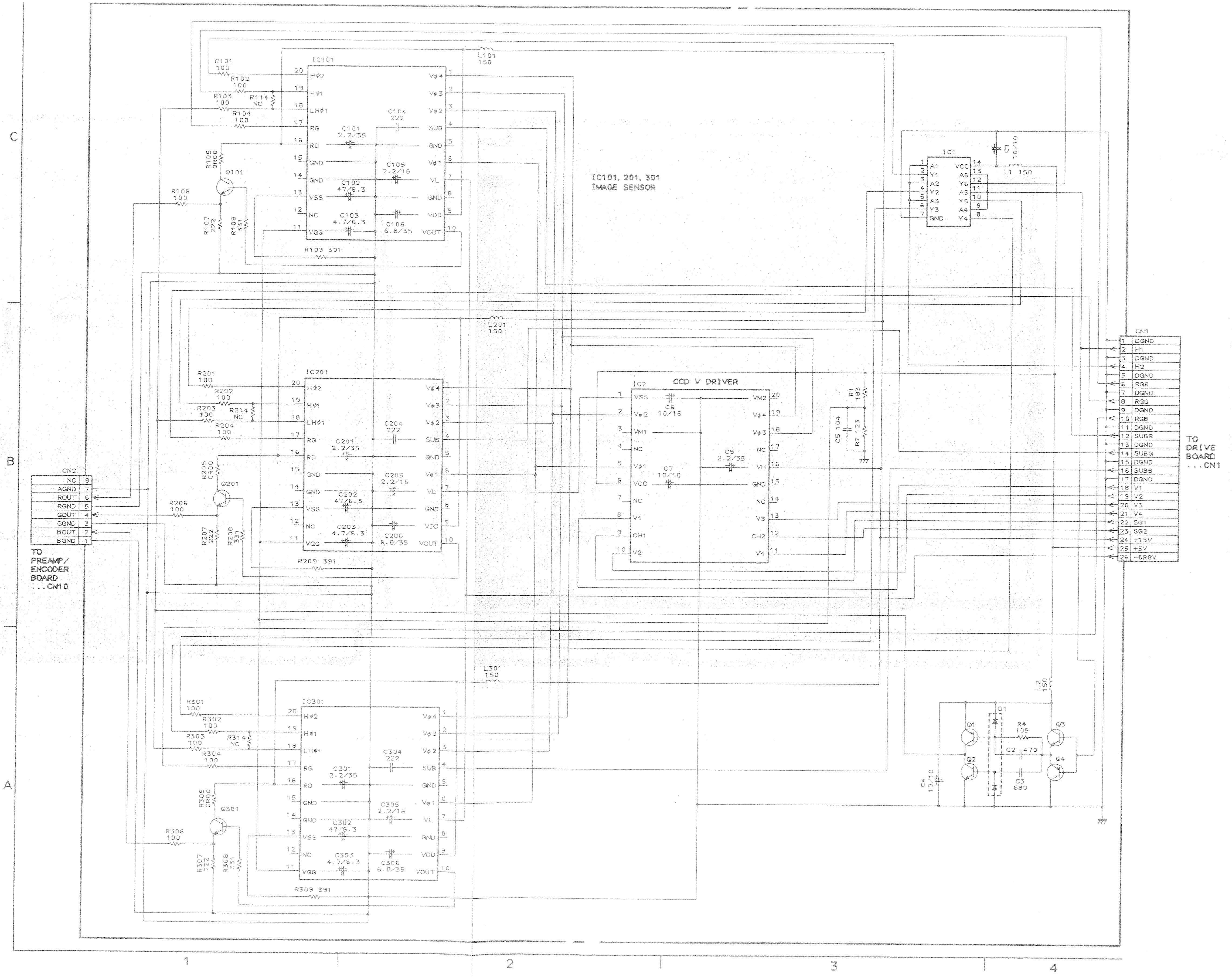
< Index>
POWER BOARD

IC1	B1
IC2	B5
IC3	A2
Q3	C6
Q4	C6
Q5	C2
Q6	C5
Q7	C5
Q8	C3
Q9	B3
Q10	B4
Q11	C4
Q12	C4
Q13	C3
Q14	B3
Q15	A4
Q16	B3
Q17	A4
Q18	B5
Q19	C5
Q20	C2
Q21	B5
Q22	B5
Q23	C2
Q24	C2
Q25	C2
Q26	C1
Q27	A6
Q28	C6
Q29	C1
Q30	C1
Q31	A6
Q39	C1
D1	C6
D2	B5
D3	C4
D4	B5
D5	B5
D6	B6
D8	B5
D9	C5


POWER BOARD
POWER BOARD
C
B
A
1
2
3
4
5
6
VRBE550P4A
POWER
CN1
CN2
TP1
TP2
TP3
VR1
VR2
IC1
IC2
IC3
IC4
IC5
L1
L2
L3
L4
L5
L6
L7
L8
L9
L10
L11
L12
L13
COMPONENT SIDE
INTERMEDIATE PATTERN
(COMPONENT SIDE VIEW)
PATTERN SIDE
INTERMEDIATE PATTERN
(PATTERN SIDE VIEW)

SCHEMATIC DIAGRAM OF SENSOR BOARD (WV-E550E)

SENSOR BOARD


IC101
R101 100
R102 100
R103 100
R114 NC
R104 100
R105 0R00
Q101
R106 100
R107 222
R108 331
R109 391
C101 2.2/35
C102 47/6.3
C103 4.7/6.3
C104 222
C105 2.2/16
C106 6.8/35
Hϕ2
Hϕ1
LHϕ1
RG
RD
GND
VSS
NC
VGG
Vϕ4
Vϕ3
Vϕ2
SUB
Vϕ1
VL
VDD
VOUT
L101 150
IC201
R201 100
R202 100
R203 100
R214 NC
R204 100
R205 0R00
Q201
R206 100
R207 222
R208 331
R209 391
C201 2.2/35
C202 47/6.3
C203 4.7/6.3
C204 222
C205 2.2/16
C206 6.8/35
L201 150
IC301
R301 100
R302 100
R303 100
R314 NC
R304 100
R305 0R00
Q301
R306 100
R307 222
R308 331
R309 391
C301 2.2/35
C302 47/6.3
C303 4.7/6.3
C304 222
C305 2.2/16
C306 6.8/35
L301 150
IC101, 201, 301
IMAGE SENSOR
IC1
A1 Y1 A2 Y2 A3 Y3 GND
VCC A6 Y6 A5 Y5 A4 Y4
C1 10/10
L1 150
IC2 CCD V DRIVER
VSS
Vϕ2
VM1
NC
Vϕ1
VCC
NC
V1
CH1
V2
VM2
Vϕ4
Vϕ3
NC
VH
GND
NC
V3
CH2
V4
C6 10/16
C7 10/10
C9 2.2/35
R1 183
R2 123
C5 104
CN2
NC 8
AGND 7
ROUT 6
RGND 5
GOUT 4
GGND 3
BOUT 2
BGND 1
TO PREAMP/ ENCODER BOARD ...CN10
CN1
1 DGND
2 H1
3 DGND
4 H2
5 DGND
6 RGR
7 DGND
8 RGG
9 DGND
10 RGB
11 DGND
12 SUBR
13 DGND
14 SUBG
15 DGND
16 SUBB
17 DGND
18 V1
19 V2
20 V3
21 V4
22 SG1
23 SG2
24 +15V
25 +5V
26 -8R8V
TO DRIVE BOARD ...CN1
Q1
Q2
Q3
Q4
D1
R4 105
C2 470
C3 680
C4 10/10
L2 150
A
B
C
1
2
3
4

< Index>

SENSOR BOARD

IC1	C3
IC2	B3
IC101	C1
IC201	B1
IC301	A1
Q1	A3
Q2	A3
Q3	A4
Q4	A4
Q101	C11
Q201	B1
Q301	A1
D1	A4

SENSOR BOARD

	IC2
Pin 1	-8.7
2	-0.3
3	25.7
4	27.0
5	-0.3
6	4.9
7	24.0
8	0.2
9	4.9
10	2.9
11	4.6
12	1.5
13	4.6
14	2.0
15	0
16	14.9
17	2.2
18	-8.3
19	-8.3
20	0

	B	C	E
Q101	8.7	14.9	8.0
201	8.3	14.9	7.5
301	8.5	14.9	7.8

Note: The value indicated in the schematic diagram should be read as follows:

☐ ☐ ☐
Multiplier (0 - 5)
2nd. Significant Digit (0 - 9)
1st. Siginificant Digit (1 - 9)

<Example>

For Resistor:
330 → 33 x 10^0 = 33 Ω
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For Capacitor:
820 → 82 x 10^0 = 82 pF
102 → 10 x 10^2 = 1000 pF = 0.001 µF
104 → 10 x 10^4 = 100000 pF = 0.1 µF
The suffix attached to capacitance indicates a type of capacitor.

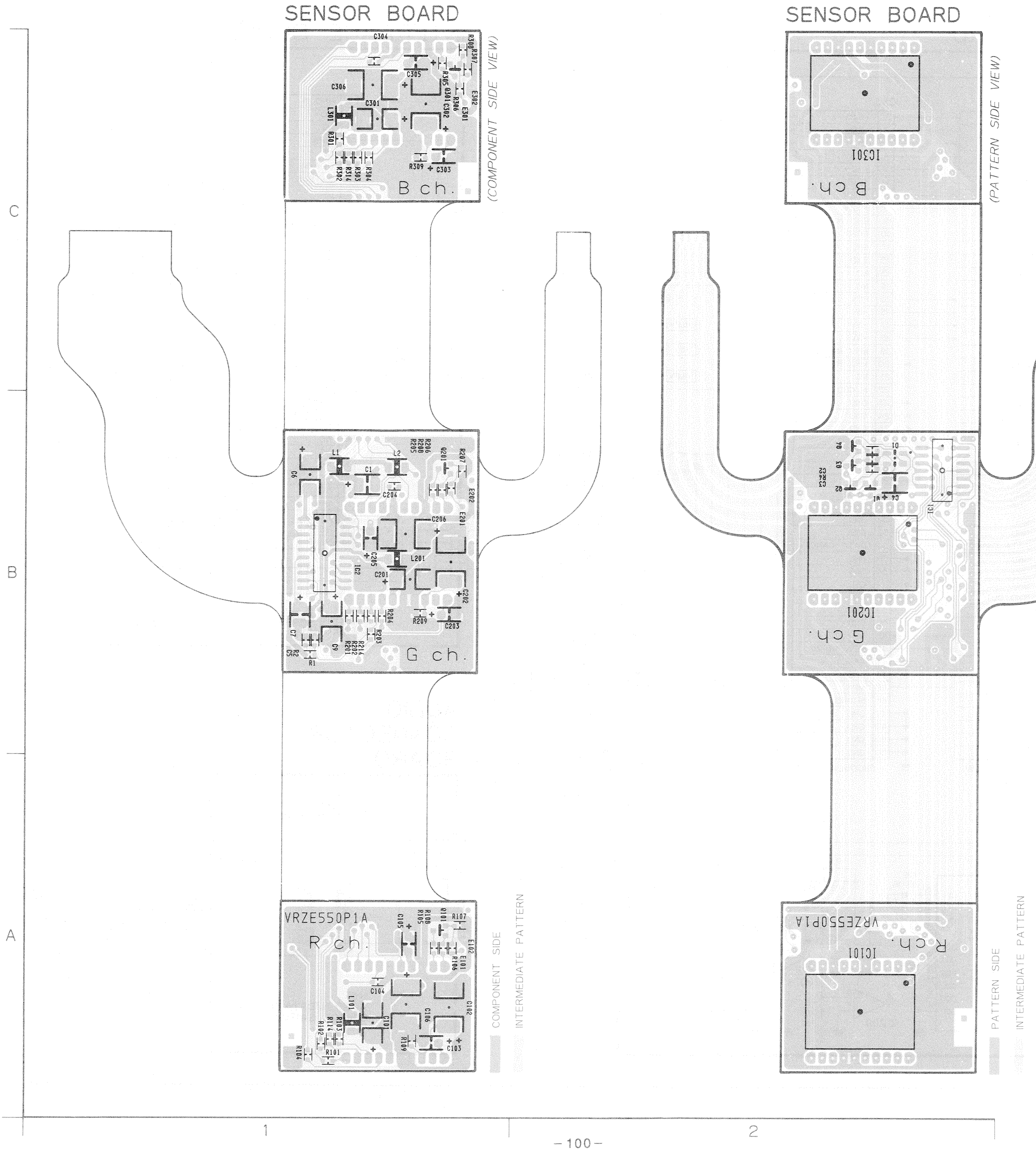
Note:

All parts mounted on the Sensor Board are not supply individually.
Please order as the Head Optical Ass'y, part number YWV0EA0282AN.

CONDUCTOR VIEW OF SENSOR BOARD (WV-E550E)

< Index>
SENSOR BOARD

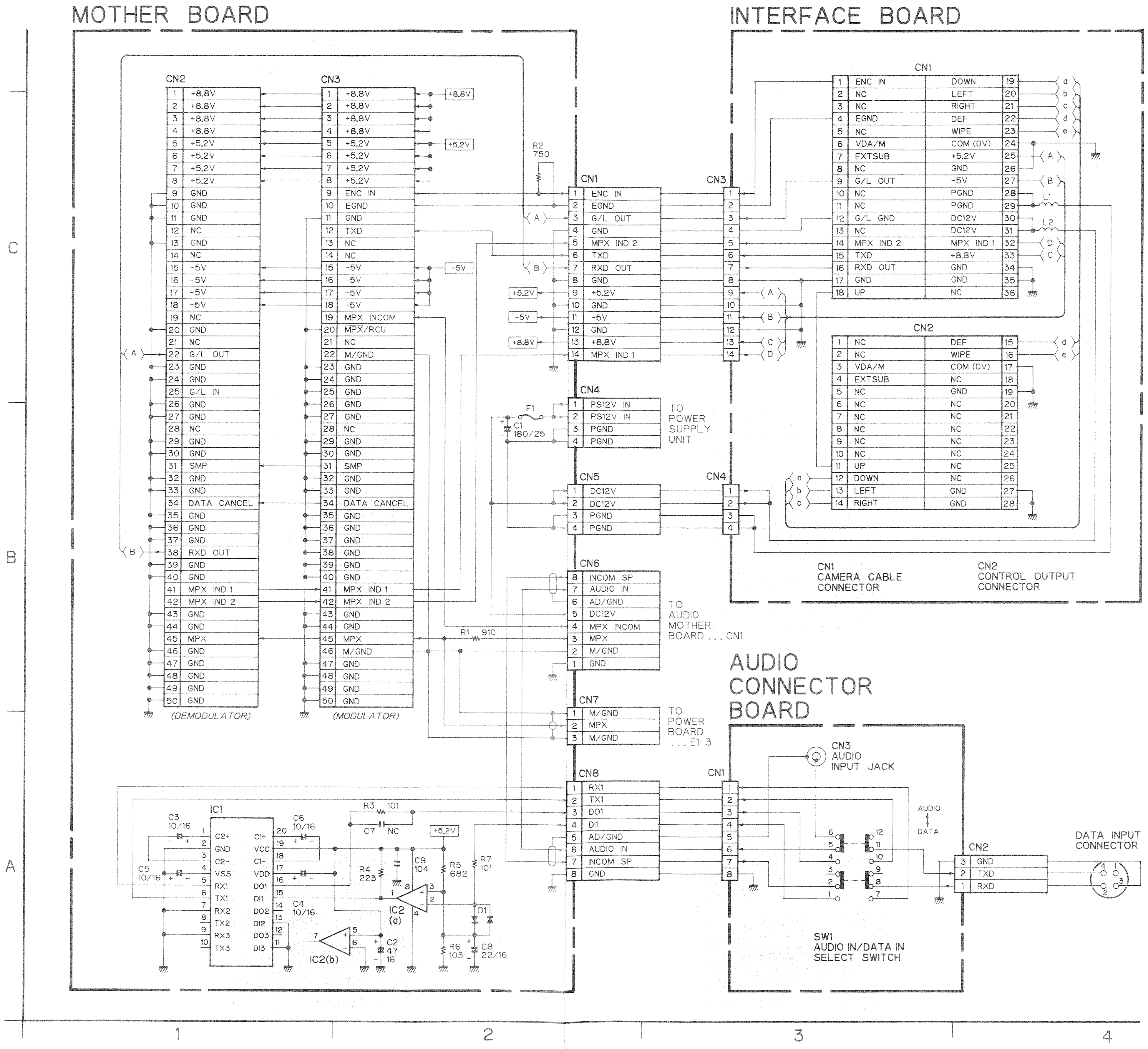
IC1	B2
IC2	B1
IC101	A2
IC201	B2
IC301	C2
Q1	B2
Q2	B2
Q3	B2
Q4	B2
Q101	A1
Q201	B1
Q301	C1
D1	B2


SENSOR BOARD
(COMPONENT SIDE VIEW)
B ch.
G ch.
R ch.
VRZE550P1A
COMPONENT SIDE
INTERMEDIATE PATTERN
SENSOR BOARD
(PATTERN SIDE VIEW)
IC301
IC201
IC101
PATTERN SIDE
INTERMEDIATE PATTERN
C
B
A
1
2

SCHEMATIC DIAGRAM OF MOTHER, INTERFACE, AUDIO CONNECTOR BOARD

< Index>
MOTHER BOARD

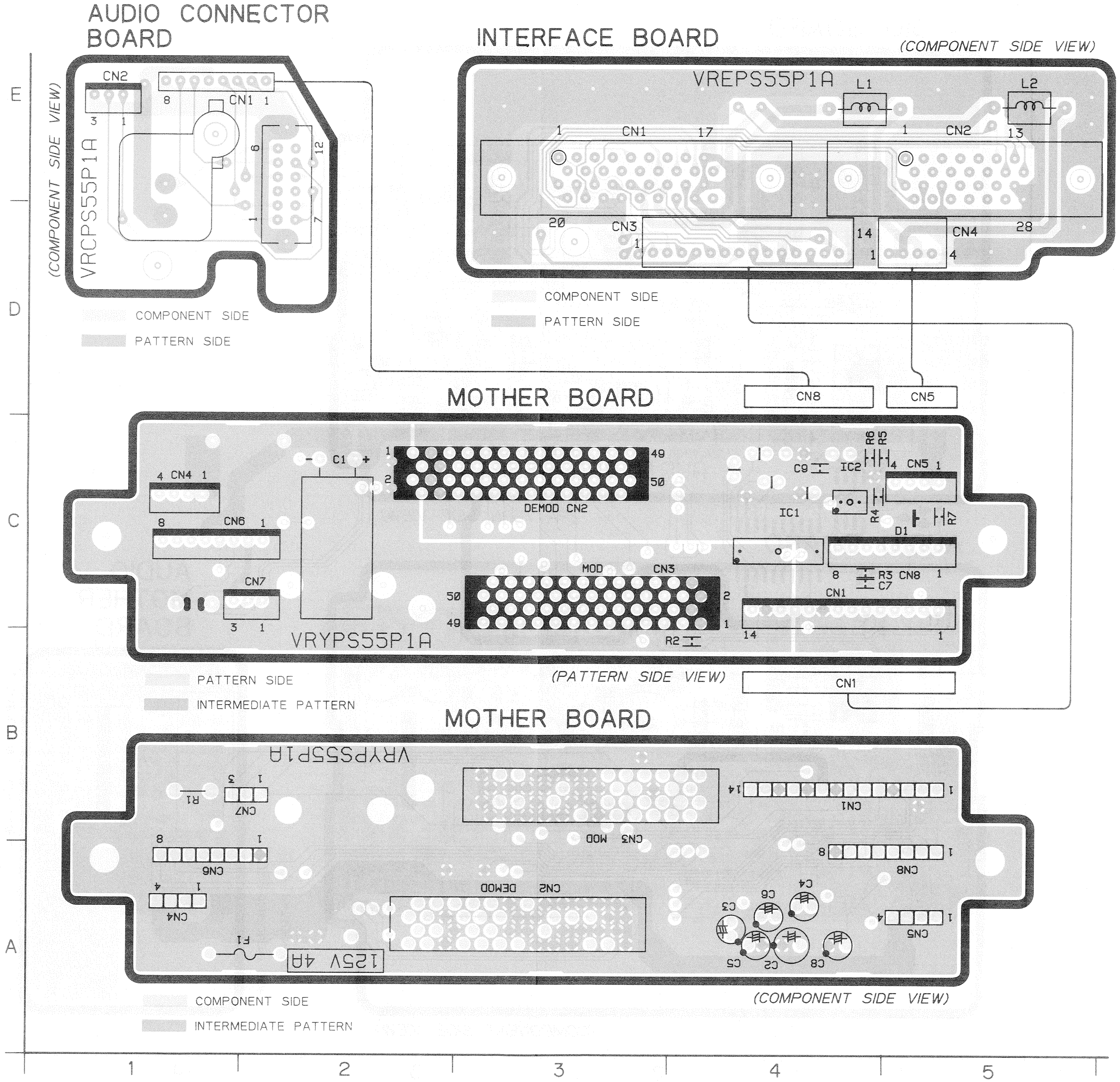
IC1	A1
IC2	A2
D1	A2


MOTHER BOARD
INTERFACE BOARD
AUDIO CONNECTOR BOARD
CN2
CN3
(DEMODULATOR)
(MODULATOR)
CN1
CN4
TO POWER SUPPLY UNIT
CN5
CN6
TO AUDIO MOTHER BOARD ... CN1
CN7
TO POWER BOARD ... E1-3
CN8
R1 910
R2 750
F1
C1 180/25
IC1
IC2 (a)
IC2(b)
C3 10/16
C5 10/16
C6 10/16
C4 10/16
C7 NC
R3 101
R4 223
C9 104
R5 682
R7 101
D1
R6 103
C8 22/16
C2 47 16
CN1 CAMERA CABLE CONNECTOR
CN2 CONTROL OUTPUT CONNECTOR
L1
L2
CN3 AUDIO INPUT JACK
AUDIO
DATA
SW1 AUDIO IN/DATA IN SELECT SWITCH
DATA INPUT CONNECTOR
C
B
A
1
2
3
4

CONDUCTOR VIEW OF MOTHER, INTERFACE, AUDIO CONNECTOR BOARD

< Index>
MOTHER BOARD

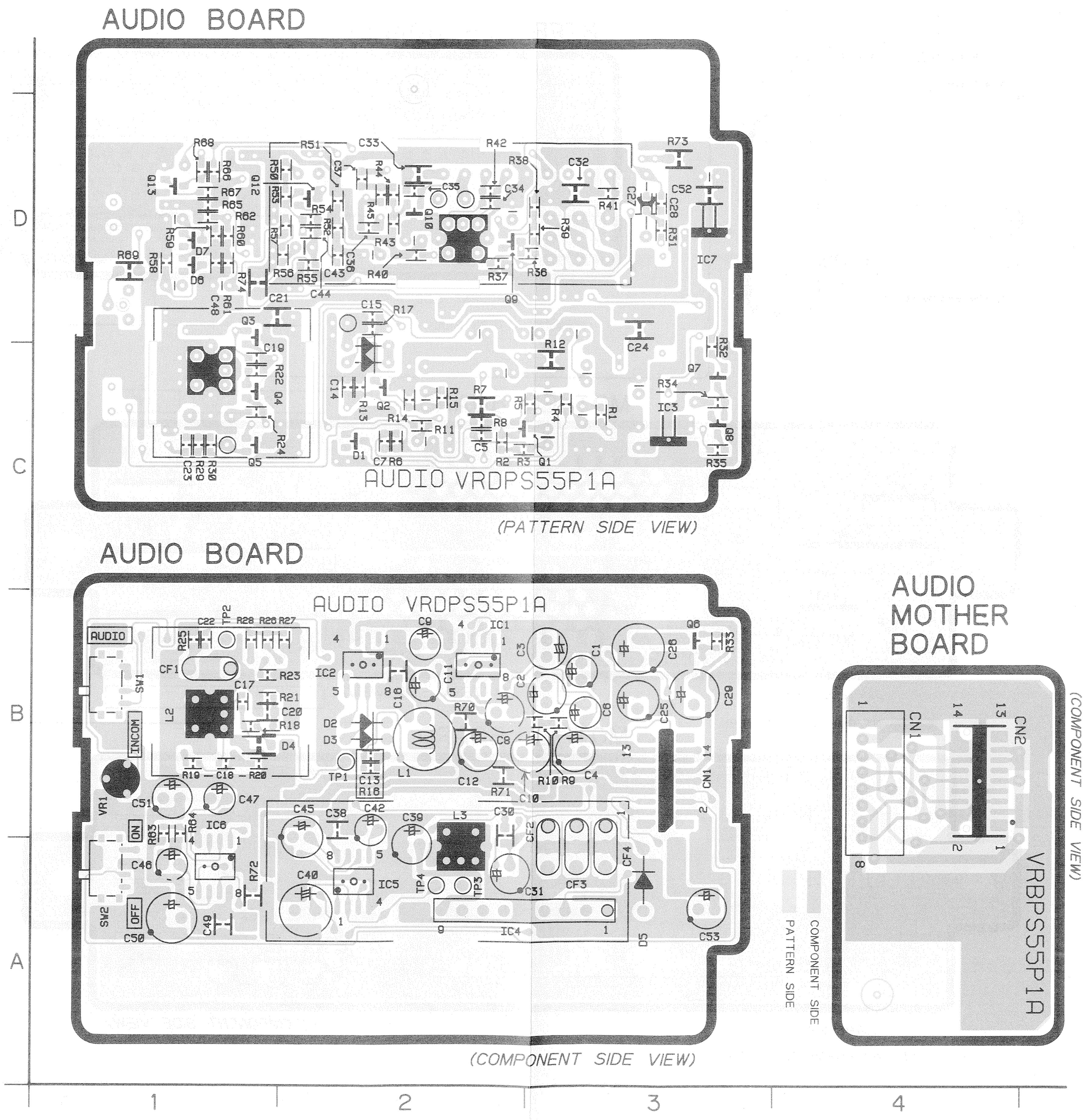
IC1	C4
IC2	C4
D1	C5


AUDIO CONNECTOR BOARD
(COMPONENT SIDE VIEW)
VRCPS55P1A
CN2
CN1
COMPONENT SIDE
PATTERN SIDE
INTERFACE BOARD
(COMPONENT SIDE VIEW)
VREPS55P1A
L1
L2
CN1
CN2
CN3
CN4
COMPONENT SIDE
PATTERN SIDE
MOTHER BOARD
CN8
CN5
CN4
CN6
CN7
C1
DEMOD CN2
MOD CN3
IC1
IC2
C9
R6
R5
R4
R7
D1
R3
C7
CN1
R2
VRYPS55P1A
PATTERN SIDE
INTERMEDIATE PATTERN
(PATTERN SIDE VIEW)
CN1
MOTHER BOARD
VRYPS55P1A
R1
F1
125V 4A
C2
C3
C4
C5
C6
C8
COMPONENT SIDE
INTERMEDIATE PATTERN
(COMPONENT SIDE VIEW)
E
D
C
B
A
1
2
3
4
5

CONDUCTOR VIEW OF AUDIO/AUDIO MOTHER BOARD (WV-PS550)

< Index>
AUDIO BOARD

IC1	B2
IC2	B2
IC3	C3
IC4	A2
IC5	A2
IC6	A1
IC7	D3
Q1	C2
Q2	C2
Q3	D1
Q4	C1
Q5	C1
Q6	B3
Q7	C3
Q8	C3
Q9	D2
Q10	D2
Q12	D2
Q13	D1
D1	C2
D2	B2
D3	B2
D4	B1
D5	A3
D6	D1
D7	D1



AUDIO BOARD
AUDIO VRDPS55P1A
(PATTERN SIDE VIEW)
AUDIO BOARD
AUDIO VRDPS55P1A
(COMPONENT SIDE VIEW)
AUDIO MOTHER BOARD
VRBPS55P1A
(COMPONENT SIDE VIEW)
CN1
CN2
COMPONENT SIDE
PATTERN SIDE
IC1
IC2
IC3
IC4
IC5
IC6
IC7
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
Q10
Q12
Q13
D1
D2
D3
D4
D5
D6
D7
SW1
SW2
VR1
L1
L2
L3
CF1
CF2
CF3
CF4
TP1
TP2
TP3
TP4
AUDIO
INCOM
ON
OFF
D
C
B
A
1
2
3
4

SCHEMATIC DIAGRAM OF AUDIO/AUDIO MOTHER BOARD (WV-PS550)

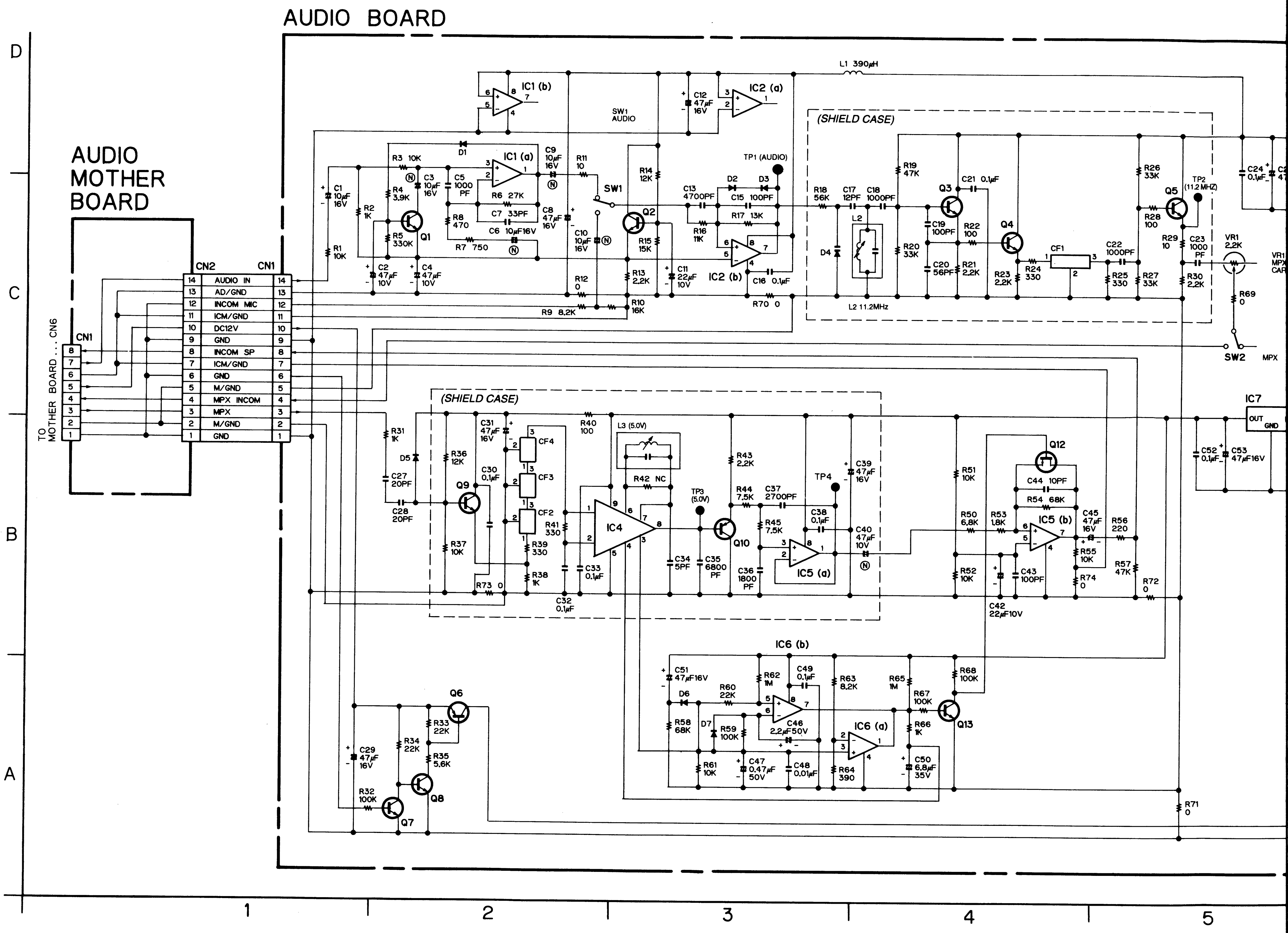
< Index>
AUDIO BOARD

IC1	C2, D2
IC2	C3, D3
IC3	D5
IC4	B2, B3
IC5	B3, B4
IC6	A3, A4
IC7	B5, C5
Q1	C2
Q2	C3
Q3	C4
Q4	C4
Q5	C5
Q6	A2
Q7	A2
Q8	A2
Q9	B2
Q10	B3
Q12	B4
Q13	B4
D1	D2
D2	C3
D3	C3
D4	C3
D5	B2
D6	A3
D7	A3

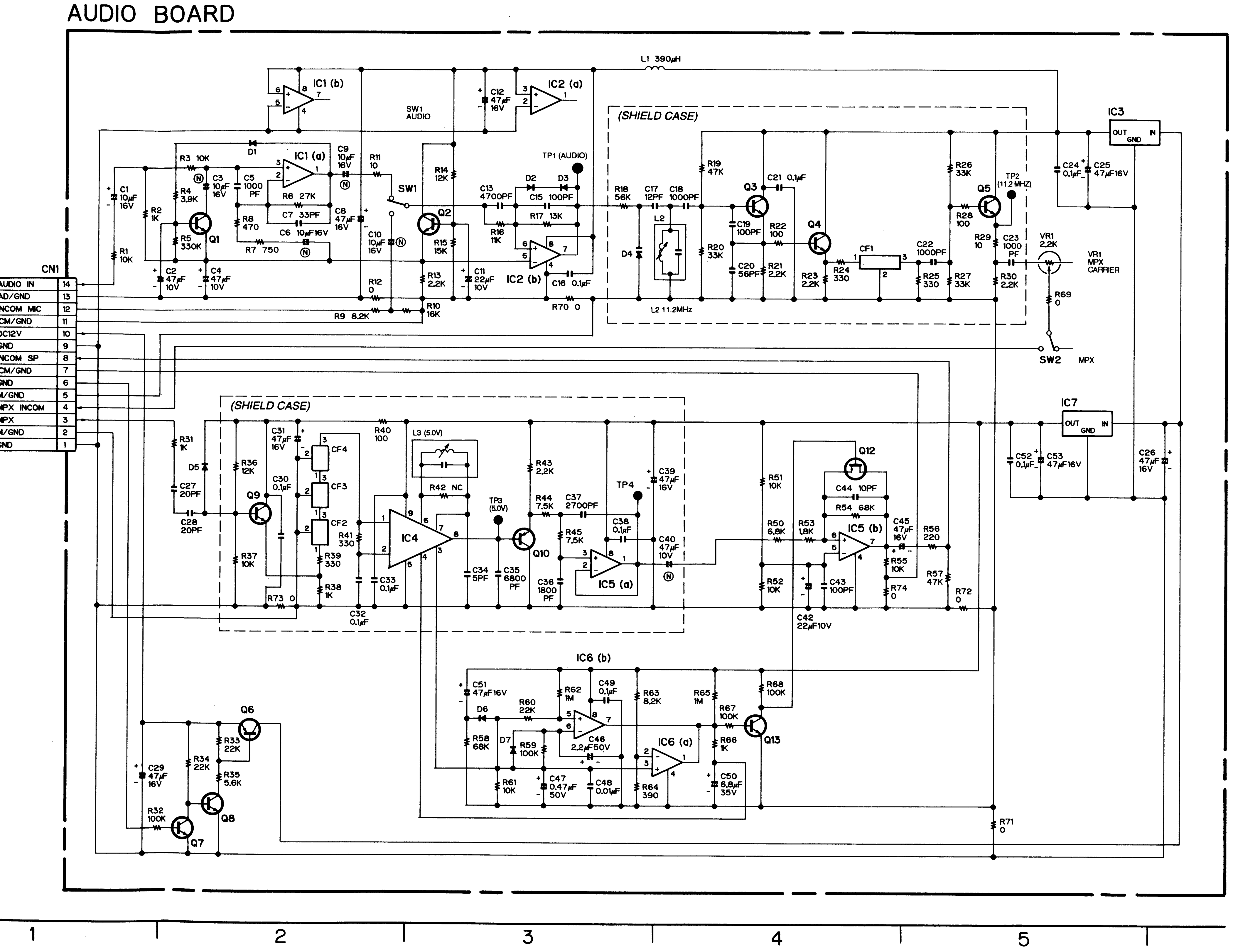
AUDIO BOARD

	IC1	IC2	IC3	IC4	IC5	IC6	IC7
Pin 1	4.3	8.4	9.1	1.9	5.7	1.4	9.2
2	4.3	0	0	1.8	5.7	0.4	0
3	4.3	8.9	11.9	1.5	5.7	1.3	11.9
4	0	0		1.4	0	0	
5	0	4.3		0	4.6	1.5	
6	8.9	4.3		3.8	4.6	1.3	
7	8.0	4.3		3.8	4.6	1.4	
8	8.9	8.9		5.1	9.2	9.0	
9				9.2			

	B	C	E
Q1	4.3	4.0	4.4
2	5.0	9.1	4.4
3	3.3	9.1	2.8
4	2.8	9.1	6.0
5	4.2	9.1	3.7
6	11.0	11.9	12.0
7	-	0.7	0
8	0.7	0	0
9	3.9	8.8	3.2
10	5.1	0	5.7
11	4.6	0	4.6
1	0.6	0	0


AUDIO BOARD
AUDIO MOTHER BOARD
TO MOTHER BOARD ... CN6
CN1
CN2
CN1
14 AUDIO IN 14
13 AD/GND 13
12 INCOM MIC 12
11 ICM/GND 11
10 DC12V 10
9 GND 9
8 INCOM SP 8
7 ICM/GND 7
6 GND 6
5 M/GND 5
4 MPX INCOM 4
3 MPX 3
2 M/GND 2
1 GND 1
D
C
B
A
1
2
3
4
5
IC1 (b)
IC1 (a)
IC2 (a)
IC2 (b)
SW1 AUDIO
SW1
TP1 (AUDIO)
D1
D2
D3
D4
C1 10μF 16V
R1 10K
R2 1K
R3 10K
R4 3.9K
R5 330K
C2 47μF 10V
C3 10μF 16V
C4 47μF 10V
Q1
C5 1000 PF
R6 27K
C7 33PF
C6 10μF16V
R7 750
R8 470
C8 47μF 16V
C9 10μF 16V
R11 10
C10 10μF 16V
R12 0
R9 8.2K
R10 16K
R13 2.2K
R14 12K
R15 15K
Q2
C11 22μF 10V
C12 47μF 16V
C13 4700PF
C15 100PF
R16 11K
R17 13K
C16 0.1μF
R70 0
L1 390μH
(SHIELD CASE)
R18 56K
C17 12PF
C18 1000PF
L2
L2 11.2MHz
R19 47K
R20 33K
Q3
C19 100PF
C20 56PF
C21 0.1μF
R21 2.2K
R22 100
Q4
R23 2.2K
R24 330
CF1
C22 1000PF
R25 330
R26 33K
R27 33K
R28 100
Q5
TP2 (11.2 MHZ)
R29 10
C23 1000 PF
R30 2.2K
VR1 2.2K
VR1 MPX CAR
R69 0
SW2
MPX
C24 0.1μF
IC7
OUT
GND
C52 0.1μF
C53 47μF16V
R31 1K
D5
C27 20PF
C28 20PF
R36 12K
R37 10K
Q9
C30 0.1μF
C31 47μF 16V
CF4
CF3
CF2
R39 330
R38 1K
R73 0
R40 100
R41 330
C32 0.1μF
C33 0.1μF
IC4
L3 (5.0V)
R42 NC
C34 5PF
TP3 (5.0V)
C35 6800 PF
Q10
R43 2.2K
R44 7.5K
R45 7.5K
C36 1800 PF
C37 2700PF
C38 0.1μF
TP4
C39 47μF 16V
C40 47μF 10V
IC5 (a)
R50 6.8K
R51 10K
R52 10K
R53 1.8K
Q12
C44 10PF
R54 68K
IC5 (b)
C43 100PF
C42 22μF10V
C45 47μF 16V
R55 10K
R74 0
R56 220
R57 47K
R72 0
R71 0
IC6 (b)
IC6 (a)
C51 47μF16V
D6
R58 68K
D7
R59 100K
R60 22K
R61 10K
R62 1M
C46 2.2μF50V
C47 0.47μF 50V
C48 0.01μF
C49 0.1μF
R63 8.2K
R64 390
R65 1M
R66 1K
R67 100K
R68 100K
C50 6.8μF 35V
Q13
Q6
R33 22K
R34 22K
R35 5.6K
C29 47μF 16V
R32 100K
Q7
Q8
Ⓝ

SCHEMATIC DIAGRAM OF AUDIO/AUDIO MOTHER BOARD (WV-PS550)


AUDIO BOARD
CN1
UDIO IN 14
AD/GND 13
NCOM MIC 12
CM/GND 11
DC12V 10
GND 9
NCOM SP 8
CM/GND 7
GND 6
A/GND 5
MPX INCOM 4
MPX 3
A/GND 2
GND 1
IC1 (a)
IC1 (b)
IC2 (a)
IC2 (b)
IC3
IC4
IC5 (a)
IC5 (b)
IC6 (a)
IC6 (b)
IC7
OUT GND IN
SW1 AUDIO
SW2 MPX
TP1 (AUDIO)
TP2 (11.2 MHZ)
TP3 (5.0V)
TP4
L1 390μH
L2 11.2MHz
L3 (5.0V)
(SHIELD CASE)
VR1 2.2K
VR1 MPX CARRIER
CF1
CF2
CF3
CF4
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
Q10
Q12
Q13
D1
D2
D3
D4
D5
D6
D7
R1 10K
R2 1K
R3 10K
R4 3.9K
R5 330K
R6 27K
R7 750
R8 470
R9 8.2K
R10 16K
R11 10
R12 0
R13 2.2K
R14 12K
R15 15K
R16 11K
R17 13K
R18 56K
R19 47K
R20 33K
R21 2.2K
R22 100
R23 2.2K
R24 330
R25 330
R26 33K
R27 33K
R28 100
R29 10
R30 2.2K
R31 1K
R32 100K
R33 22K
R34 22K
R35 5.6K
R36 12K
R37 10K
R38 1K
R39 330
R40 100
R41 330
R42 NC
R43 2.2K
R44 7.5K
R45 7.5K
R50 6.8K
R51 10K
R52 10K
R53 1.8K
R54 68K
R55 10K
R56 220
R57 47K
R58 68K
R59 100K
R60 22K
R61 10K
R62 1M
R63 8.2K
R64 390
R65 1M
R66 1K
R67 100K
R68 100K
R69 0
R70 0
R71 0
R72 0
R73 0
R74 0
C1 10μF 16V
C2 47μF 10V
C3 10μF 16V
C4 47μF 10V
C5 1000 PF
C6 10μF16V
C7 33PF
C8 47μF 16V
C9 10μF 16V
C10 10μF 16V
C11 22μF 10V
C12 47μF 16V
C13 4700PF
C15 100PF
C16 0.1μF
C17 12PF
C18 1000PF
C19 100PF
C20 56PF
C21 0.1μF
C22 1000PF
C23 1000 PF
C24 0.1μF
C25 47μF16V
C26 47μF 16V
C27 20PF
C28 20PF
C29 47μF 16V
C30 0.1μF
C31 47μF 16V
C32 0.1μF
C33 0.1μF
C34 5PF
C35 6800 PF
C36 1800 PF
C37 2700PF
C38 0.1μF
C39 47μF 16V
C40 47μF 10V
C42 22μF10V
C43 100PF
C44 10PF
C45 47μF 16V
C46 2.2μF50V
C47 0.47μF 50V
C48 0.01μF
C49 0.1μF
C50 6.8μF 35V
C51 47μF16V
C52 0.1μF
C53 47μF16V
Ⓝ
1
2
3
4
5

Note: The value indicated in the schematic diagram should be read as follows:

□ □ □

Multiplier (0 - 5)
2nd. Significant Digit (0 - 9)
1st. Significant Digit (1 - 9)

<Example>

For Resistor:

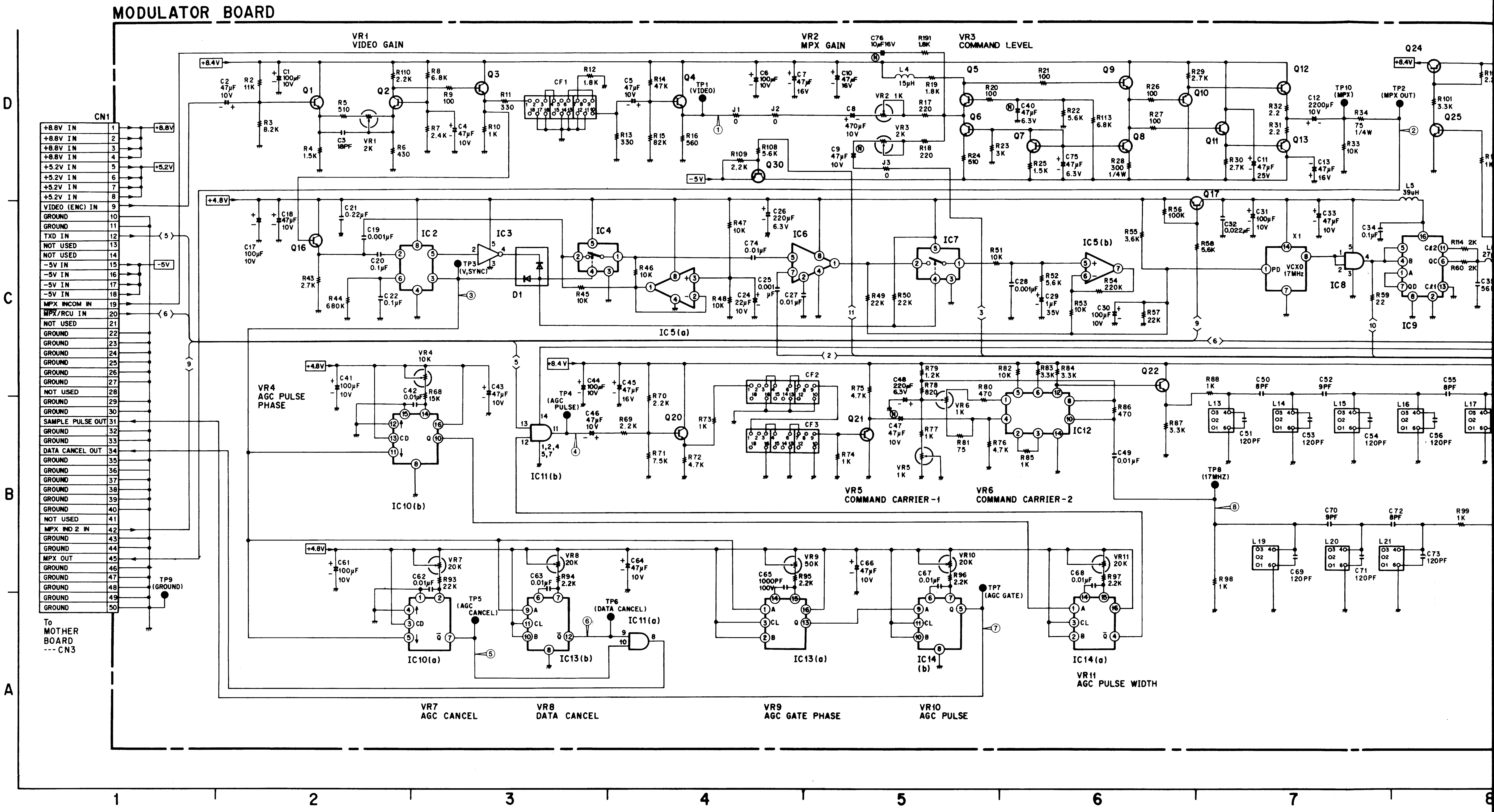
330 → 33 x 10^0 = 33 Ω
561 → 56 x 10^1 = 560 Ω
123 → 12 x 10^3 = 12k Ω
0R00 = 0 Ω

For Capacitor:

820 → 82 x 10^0 = 82 pF
102 → 10 x 10^2 = 1000 pF = 0.001 μF
104 → 10 x 10^4 = 100000 pF = 0.1 μF

The suffix attached to capacitance indicates a type of capacitor.

SCHEMATIC DIAGRAM OF MODULATOR BOARD (WV-PS550)

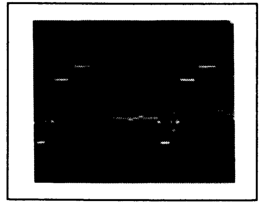

MODULATOR BOARD
CN1
+8.8V IN
+5.2V IN
VIDEO (ENC) IN
GROUND
TXD IN
NOT USED
-5V IN
MPX INCOM IN
MPX/RCU IN
SAMPLE PULSE OUT
DATA CANCEL OUT
MPX IND 2 IN
MPX OUT
To MOTHER BOARD ---CN3
TP9 (GROUND)
VR1 VIDEO GAIN
VR2 MPX GAIN
VR3 COMMAND LEVEL
VR4 AGC PULSE PHASE
VR5 COMMAND CARRIER-1
VR6 COMMAND CARRIER-2
VR7 AGC CANCEL
VR8 DATA CANCEL
VR9 AGC GATE PHASE
VR10 AGC PULSE
VR11 AGC PULSE WIDTH
TP1 (VIDEO)
TP2 (MPX OUT)
TP3 (V.SYNC)
TP4 (AGC PULSE)
TP5 (AGC CANCEL)
TP6 (DATA CANCEL)
TP7 (AGC GATE)
TP8 (17MHZ)
TP10 (MPX)
IC2
IC3
IC4
IC5(a)
IC5(b)
IC6
IC7
IC8
IC9
IC10(a)
IC10(b)
IC11(a)
IC11(b)
IC12
IC13(a)
IC13(b)
IC14(a)
IC14(b)
CF1
CF2
CF3
X1 VCXO 17MHz
D1
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
Q10
Q11
Q12
Q13
Q16
Q17
Q20
Q21
Q22
Q24
Q25
Q30
+8.4V
+4.8V
-5V
D
C
B
A
1
2
3
4
5
6
7
8

< Index>
MODULATOR BOARD

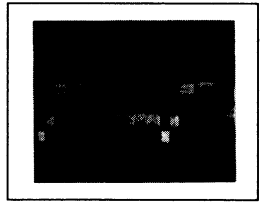
IC1	C9, D9	IC9	C7, C8	Q3	D3	Q11	D7	Q19	C9	Q27	C9
IC2	C2, C3	IC10	A2/B2, A3	Q4	D4	Q12	D7	Q20	B4	Q28	B9
IC3	C3	IC11	B3/A4	Q5	D5	Q13	D7	Q21	B5	Q29	B10
IC4	C3, C4	IC12	B6	Q6	D5	Q14	D8	Q22	C6	Q30	D4
IC5	C4/C6	IC13	A3/A4, A5	Q7	D6	Q15	D8	Q23	C9	D1	C3
IC6	C4,C5	IC14	A5/A6	Q8	D6	Q16	C2	Q24	D8		
IC7	C5	Q1	D2	Q9	D6	Q17	C6, C7	Q25	D8		
IC8	C7	Q2	D2	Q10	D7	Q18	C9	Q26	C9		

<Waveform>

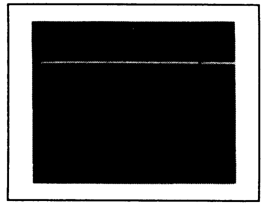
1. 10μsec/DIV, 0.2V/DIV



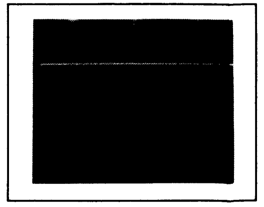
2. 10μsec/DIV, 0.5V/DIV



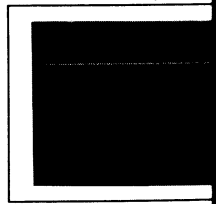
3. 2msec/DIV, 1V/DIV



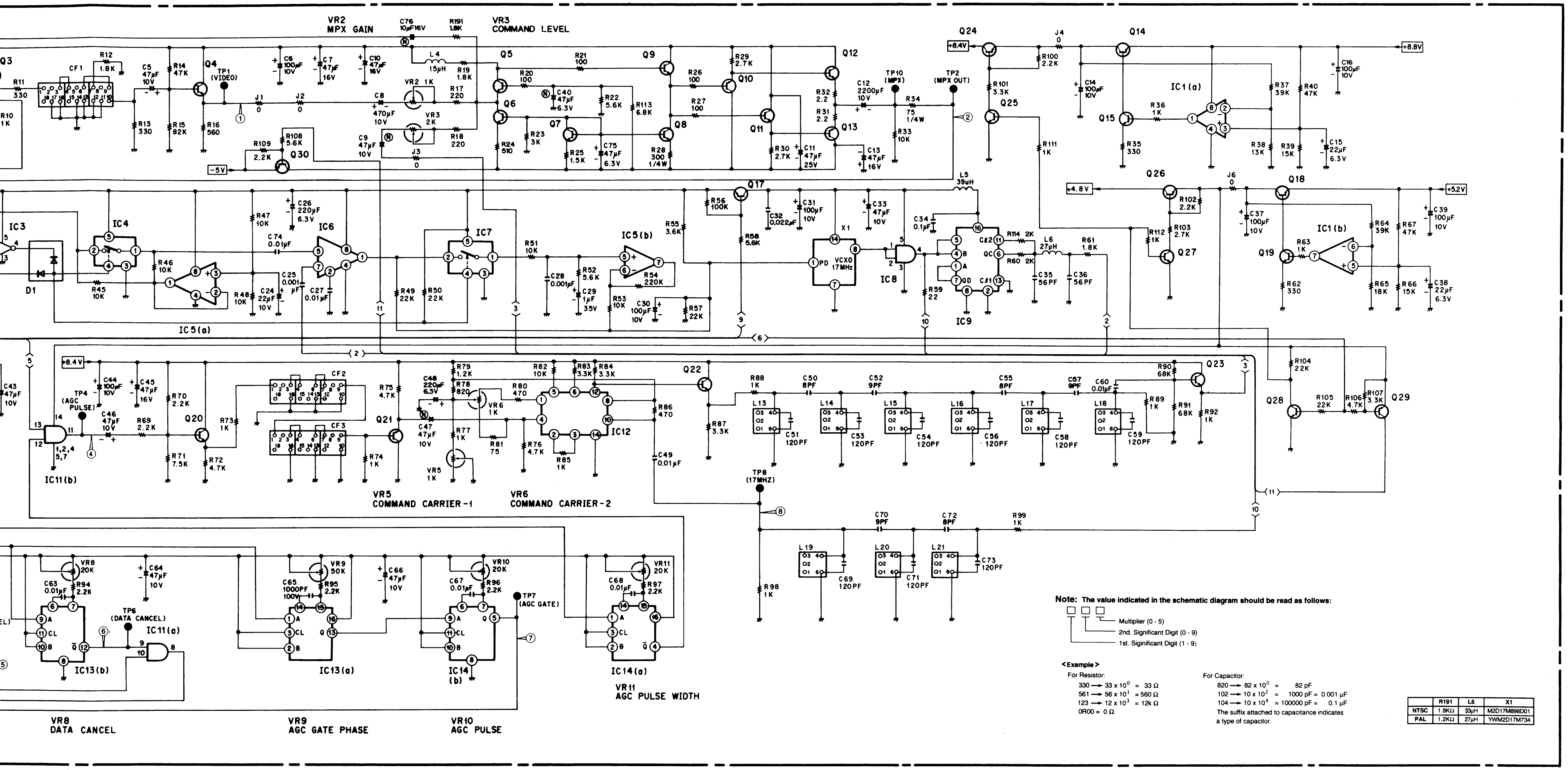
4. 2msec/DIV, 1V/DIV



5. 2msec/DIV, 1V/D



SCHEMATIC DIAGRAM OF MODULATOR BOARD (WV-PS550)


VR2
MPX GAIN
VR3
COMMAND LEVEL
C76 10µF16V
R191 1.8K
Q3
Q4
Q5
Q6
Q7
Q8
Q9
Q10
Q11
Q12
Q13
Q14
Q15
Q17
Q18
Q19
Q20
Q21
Q22
Q23
Q24
Q25
Q26
Q27
Q28
Q29
Q30
CF1
CF2
CF3
TP1 (VIDEO)
TP10 (MPX)
TP2 (MPX OUT)
TP4 (AGC PULSE)
TP6 (DATA CANCEL)
TP7 (AGC GATE)
TP8 (17MHZ)
IC1(a)
IC1(b)
IC3
IC4
IC5(a)
IC5(b)
IC6
IC7
IC8
IC9
IC11(a)
IC11(b)
IC12
IC13(a)
IC13(b)
IC14(a)
IC14 (b)
D1
X1
VCXO 17MHz
PD
L4 15µH
L5 39µH
L6 27µH
L13
L14
L15
L16
L17
L18
L19
L20
L21
-5V
+8.4V
+8.8V
+4.8V
+5.2V
J1 0
J2 0
J3 0
J4 0
J6 0
VR5
COMMAND CARRIER-1
VR6
COMMAND CARRIER-2
VR8
DATA CANCEL
VR9
AGC GATE PHASE
VR10
AGC PULSE
VR11
AGC PULSE WIDTH

Note: The value indicated in the schematic diagram should be read as follows:

□ □ □

- Multiplier (0 - 5)
- 2nd. Significant Digit (0 - 9)
- 1st. Siginificant Digit (1 - 9)

<Example>

For Resistor:
330 ⟶ 33×10^0 = 33 Ω
561 ⟶ 56×10^1 = 560 Ω
123 ⟶ 12×10^3 = 12k Ω
0R00 = 0 Ω

For Capacitor:
820 ⟶ 82×10^0 = 82 pF
102 ⟶ 10×10^2 = 1000 pF = 0.001 µF
104 ⟶ 10×10^4 = 100000 pF = 0.1 µF
The suffix attached to capacitance indicates a type of capacitor.

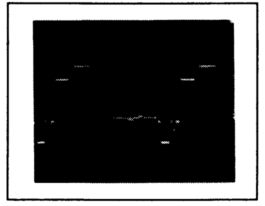
	R191	L6	X1
NTSC	1.8KΩ	33µH	M2D17M898D01
PAL	1.2KΩ	27µH	YWM2D17M734

3 4 5 6 7 8 9 10

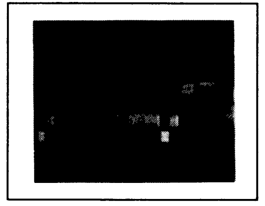
C9	Q27	C9
B4	Q28	B9
B5	Q29	B10
C6	Q30	D4
C9	D1	C3
D8		
D8		
C9		

<Waveform>

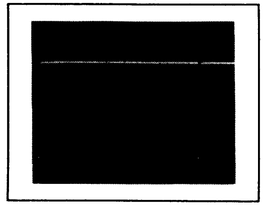
1. 10µsec/DIV, 0.2V/DIV



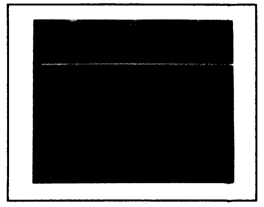
2. 10µsec/DIV, 0.5V/DIV



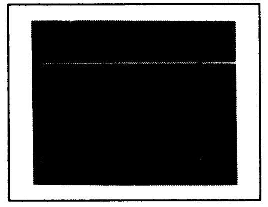
3. 2msec/DIV, 1V/DIV



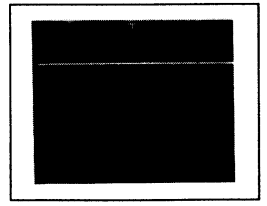
4. 2msec/DIV, 1V/DIV



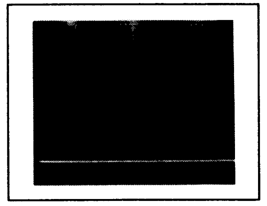
5. 2msec/DIV, 1V/DIV



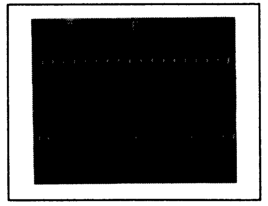
6. 2msec/DIV, 1V/DIV



7. 2msec/DIV, 1V/DIV



8. 0.1msec/DIV, 0.2V/DIV



CONDUCTOR VIEW OF MODULATOR BOARD (WV-PS550)

<Voltages>

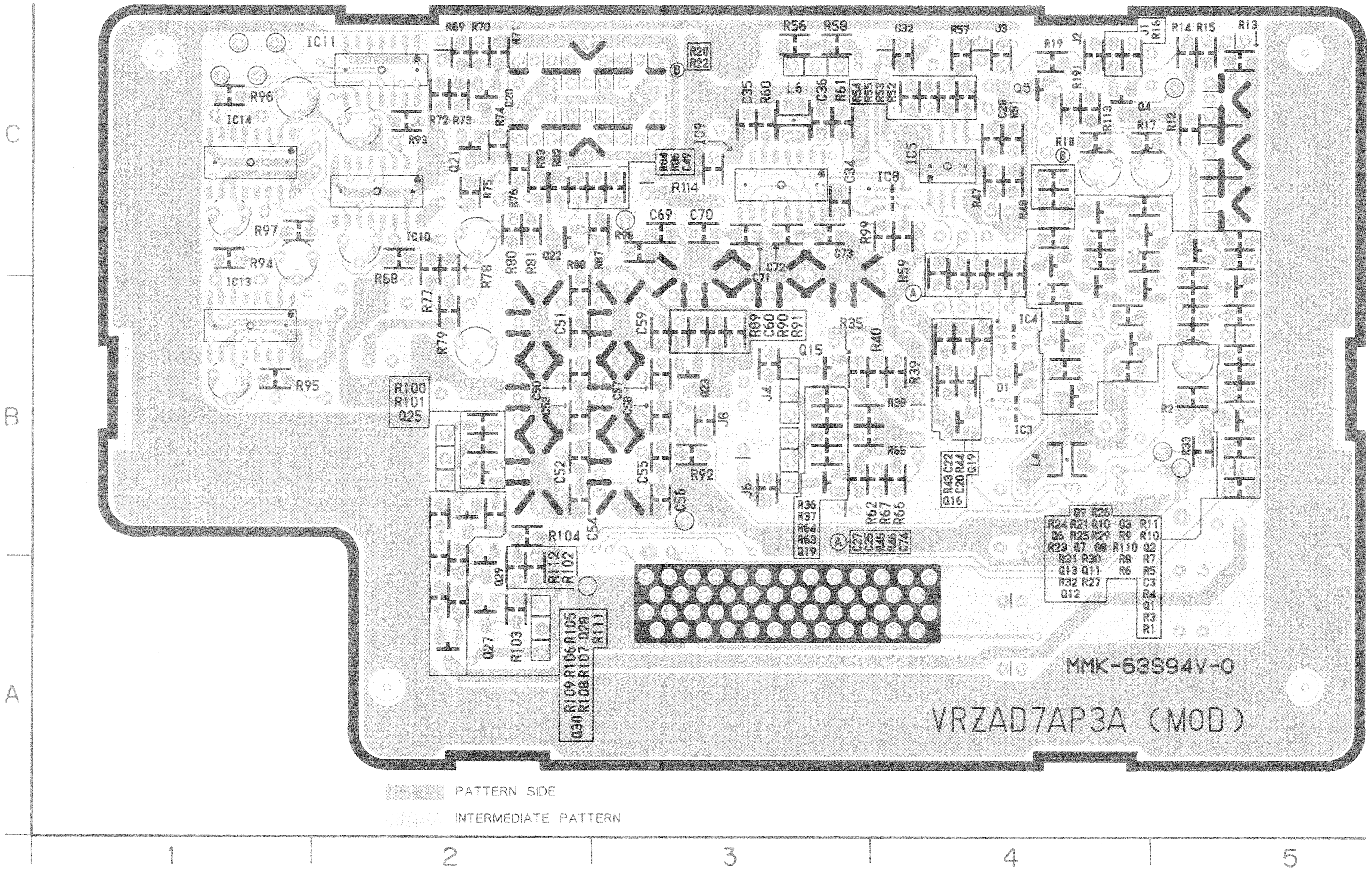
	IC1	IC2	IC3	IC4	IC5	IC6	IC7	IC8	IC9	IC10	IC11	IC12	IC13	IC14
Pin 1	0	0	0	2.5	2.5	4.2	4.1	0	0	0	0	3.1	4.9	0
2	2.1		4.6	0.3	0.4	2.5	4.2	0	0	5.0	0	2.4	5.0	5.0
3	0	4.9	0.2	0	2.5	1.8	0	0	0	5.0	0	0	5.0	0
4	0	0	0.3	0.8	0	0	0.8	0	0	0	0	3.1	5.0	5.0
5	1.2	0	5.0	5.0	4.2	1.8	0	0.1	0	4.9	0	1.0	0	0
6	1.6	1.2			4.2	2.5			0	0	0	0	0	0
7	0.7	2.5			2.9	2.5			0	0	0	0	4.9	5.0
8	0	5.0			5.0	5.0			0	0	4.9	5.3	0	0
9									0	5.0	0	0	4.9	0
10									0	0	0	5.3	5.0	5.0
11									0	0	5.0	0	5.0	5.0
12									0	5.0	5.0	5.9	0	0
13									0	5.0	5.0	0	0	0
14									0	5.0	0	0	0	0
15									0	0			5.0	4.9
16									0	5.0			5.0	5.0

	B	C	E
Q1	3.5	8.6	2.7
2	2.2	4.0	1.4
3	4.0	0.2	3.2
4	0.3	8.6	4.1
5	-2.4	1.6	0.5
6	-2.9	-3.1	-3.7
7	-2.9	-2.9	0.3
8	-2.9	0.9	0.3
9	0.3	8.6	0.9
10	0.9	-4.9	0.3
11	0.9	8.5	0.1
12	1.6	8.6	0.9
13	0.4	-4.9	0.9
14	8.0	8.6	8.7
15	0.7	8.0	0.1

	B	C	E
16	3.2	5.0	2.6
17	4.9	0	5.0
18	4.5	5.0	5.1
19	0.7	4.5	0
20	0	8.6	5.9
21	2.9	0	0
22	5.9	0	5.1
23	3.4	8.6	2.7
24	7.9	8.6	8.6
25	0.6	0	0
26	4.4	5.0	5.0
27	0.6	0	0
28	0	0.7	0
29	4.3	5.0	5.0
30	-4.2	0	0

MODULATOR BOARD

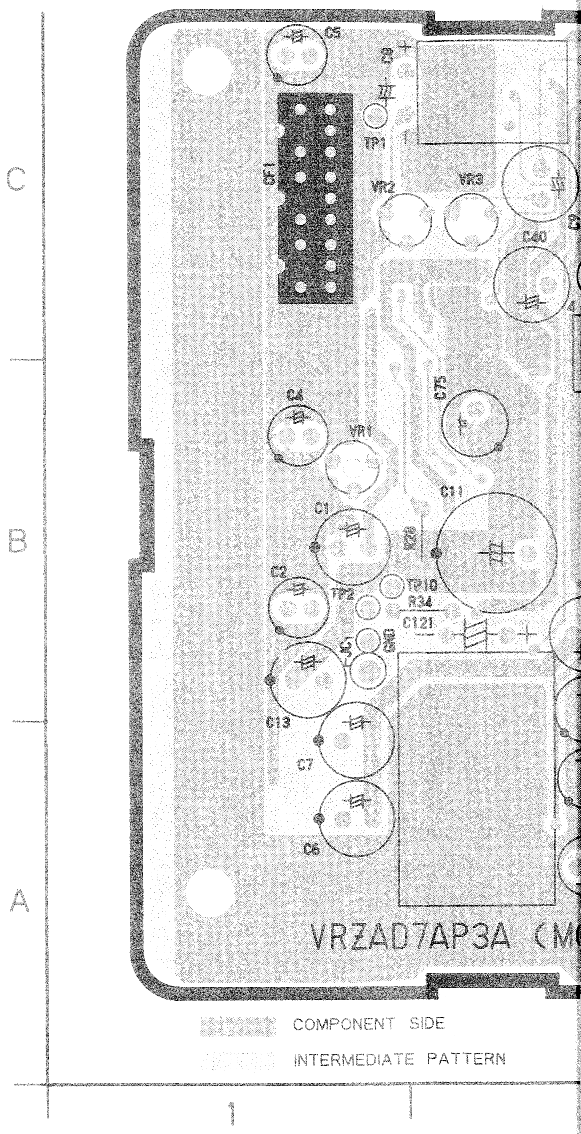
(PATTERN SIDE VIEW)


C
B
A
1
2
3
4
5
IC11
IC14
IC13
IC10
IC9
IC5
IC8
IC4
IC3
R96
R97
R94
R95
R93
R68
R69 R70
R71
R72 R73
R74
Q20
Q21
Q22
R75
R76
R77
R78
R79
R80
R81
R82
R83
R84 R86 C49
R114
R20 R22
R56 R58
C32
R57
J3
R19
J2
J1 R16
R14 R15
R13
C35
R60
L6
C36
R61
R54 R55 R53 R52
C28 R51
Q5
R191
R113
Q4
R17
R12
R18
C34
C69
C70
C71
C72
C73
R99
R59
C51
C59
R89 C60 R90 R91
R35
R40
R39
Q15
R38
J4
Q23
J8
D1
IC3
R2
R33
R100 R101 Q25
C50
C53
C57
C58
C52
C55
C56
R92
R65
J6
R36 R37 R64 R63 Q19
R62 R67 R66
C27 C25 R45 R46 C74
R43 C22 C20 R44 C19 Q16
Q9 R26
R24 R21 Q10 Q3 R11
Q6 R25 R29 R9 R10
R23 Q7 Q8 R110 Q2
R31 R30 R8 R7
Q13 Q11 R6 R5
R32 R27 C3
Q12
R4 Q1 R3 R1
R104
C54
R112 R102
Q29
Q27
R103
R109 R105 Q28
R111
Q30 R108 R107 R106
MMK-63S94V-0
VRZAD7AP3A (MOD)

PATTERN SIDE

INTERMEDIATE PATTERN

MODULATOR BOAR


C
B
A
1
C5
C8
CF1
TP1
VR2
VR3
C40
C75
C4
VR1
C1
C11
R20
C2
TP2
TP10
R34
C121
C13
C7
C6
VRZAD7AP3A (M

COMPONENT SIDE

INTERMEDIATE PATTERN

< Index>

MODULATOR BOARD
PATTERN SIDE

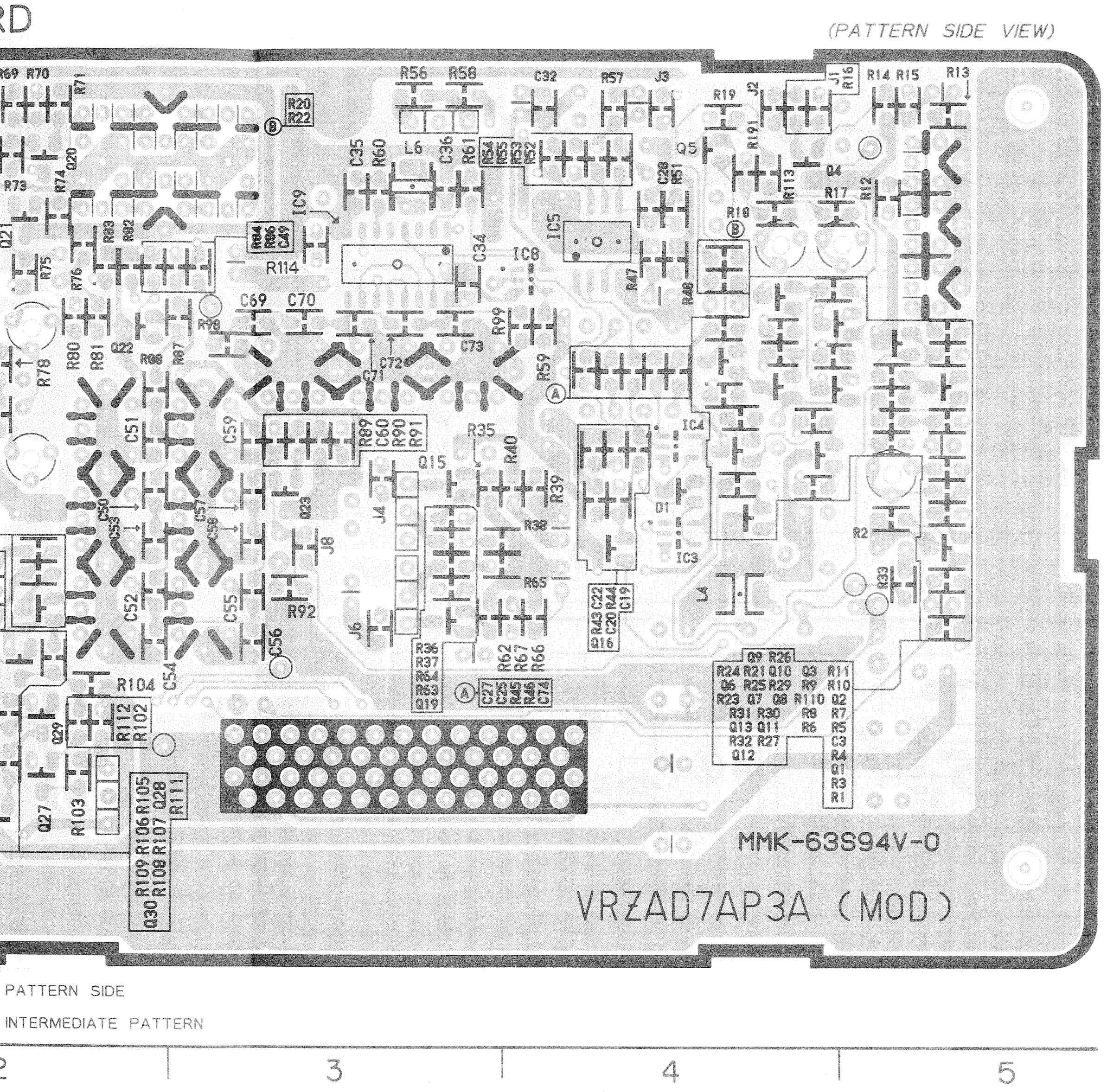
IC3	B4
IC4	B4
IC5	C4
IC8	C4
IC9	C3
IC10	C2
IC11	C2
IC13	B1
IC14	C1
Q1	B5
Q2	B5
Q3	C3
Q4	C4
Q5	C4
Q6	B4
Q7	B4
Q8	B4
Q9	C4
Q10	C4
Q11	B4
Q12	B4
Q13	B4
Q15	B3
Q16	B4
Q19	B2
Q20	C2
Q21	C2
Q22	C2
Q23	B3
Q25	B2
Q27	A2
Q28	B2
Q29	A2
Q30	A2
D1	B4

< Index>

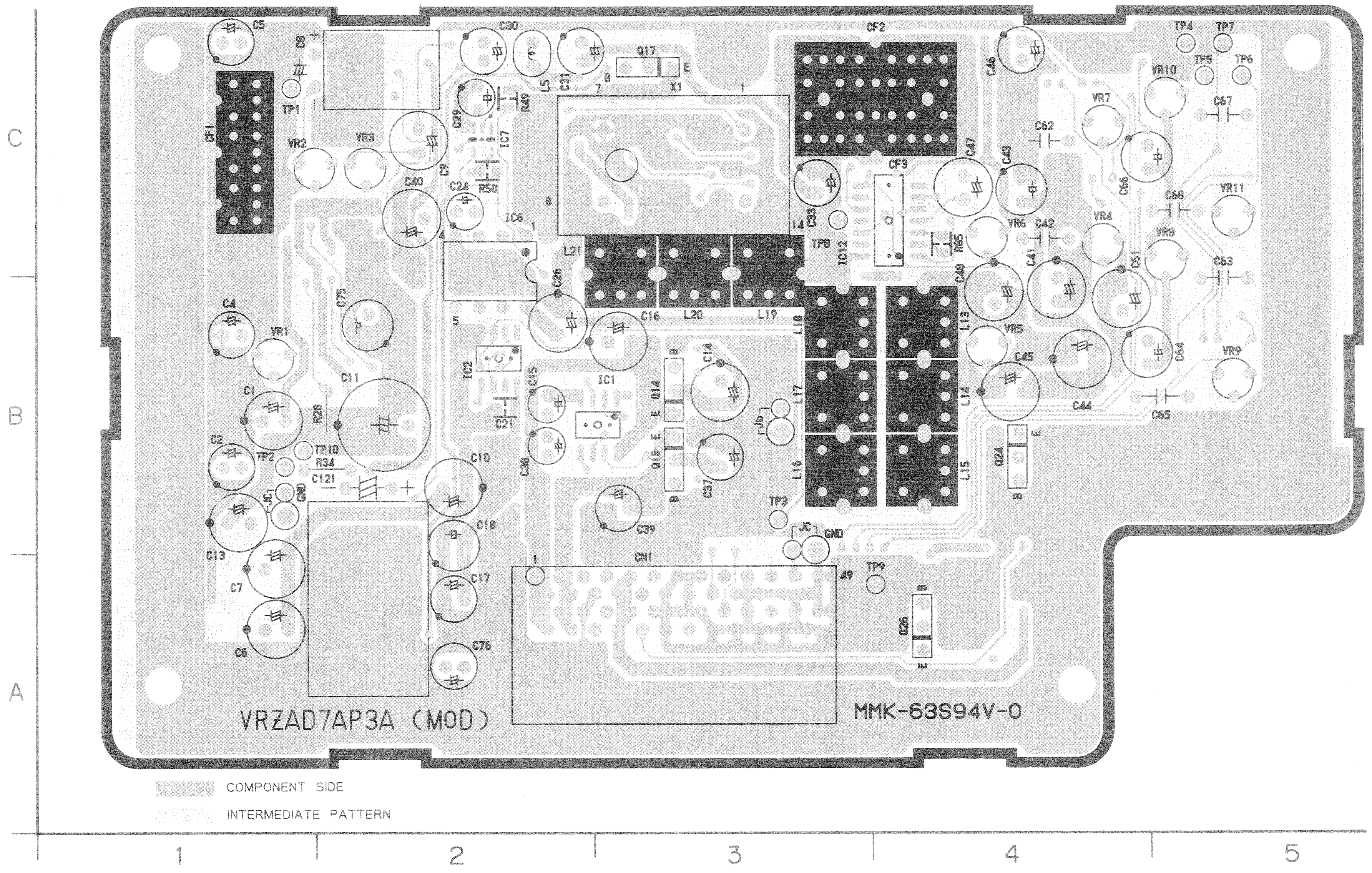
MODULATOR BOARD
COMPONENT SIDE

IC1	B2,B3
IC2	B2
IC6	B2,C2
IC7	C2
IC12	C4
Q14	B3
Q17	C3
Q18	B3
Q24	B4
Q26	A4

CONDUCTOR VIEW OF MODULATOR BOARD (WV-PS550)


RD
(PATTERN SIDE VIEW)
MMK-63S94V-0
VRZAD7AP3A (MOD)
PATTERN SIDE
INTERMEDIATE PATTERN
2
3
4
5

MODULATOR BOARD


(COMPONENT SIDE VIEW)
C
B
A
VRZAD7AP3A (MOD)
MMK-63S94V-0
COMPONENT SIDE
INTERMEDIATE PATTERN
1
2
3
4
5

< Index>

MODULATOR BOARD

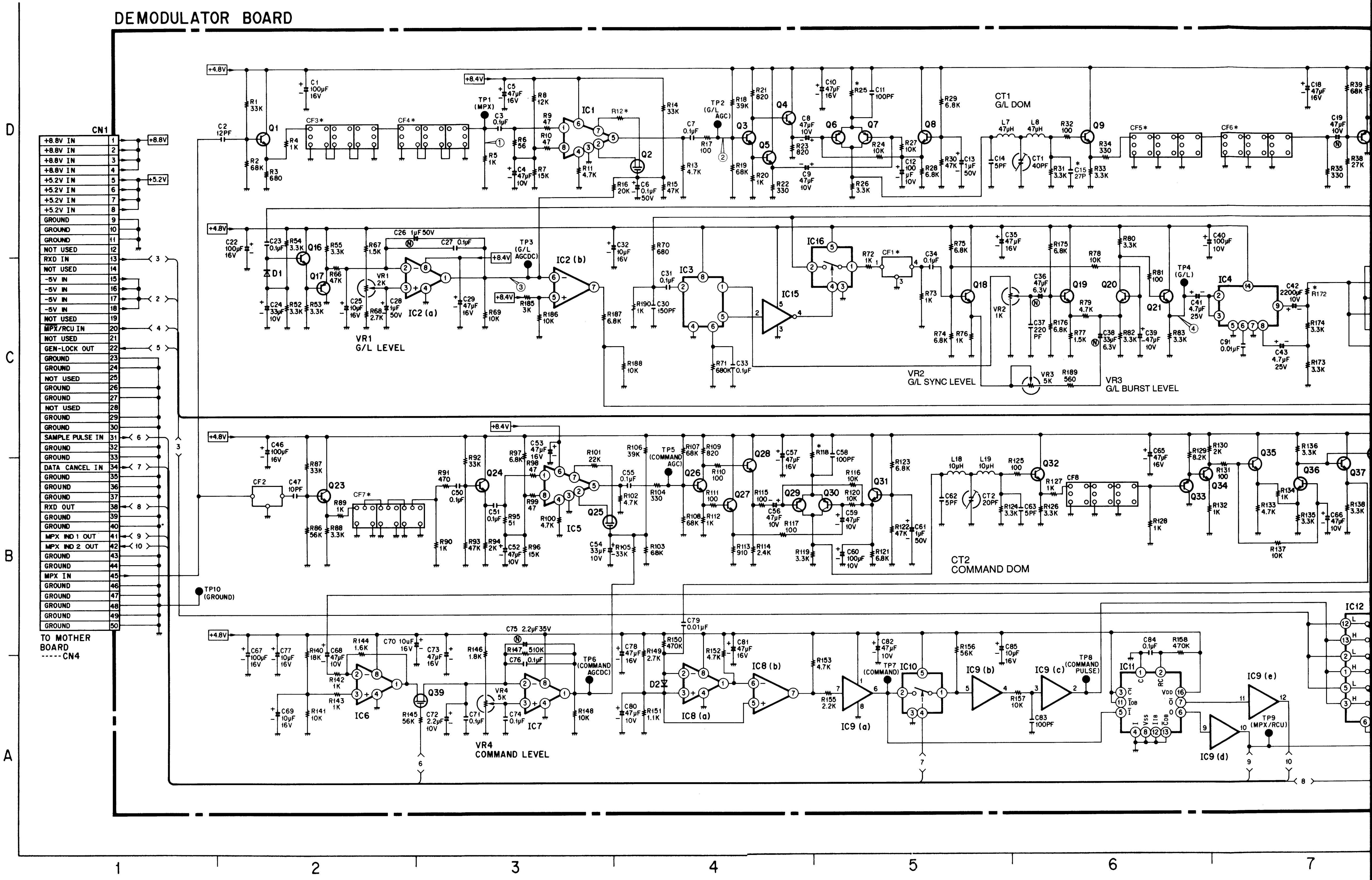
COMPONENT SIDE

IC1	B2,B3
IC2	B2
IC6	B2,C2
IC7	C2
IC12	C4
Q14	B3
Q17	C3
Q18	B3
Q24	B4
Q26	A4

SCHEMATIC DIAGRAM OF DEMODULATOR BOARD (WV-PS550)

< Index>
DEMODULATOR BOARD

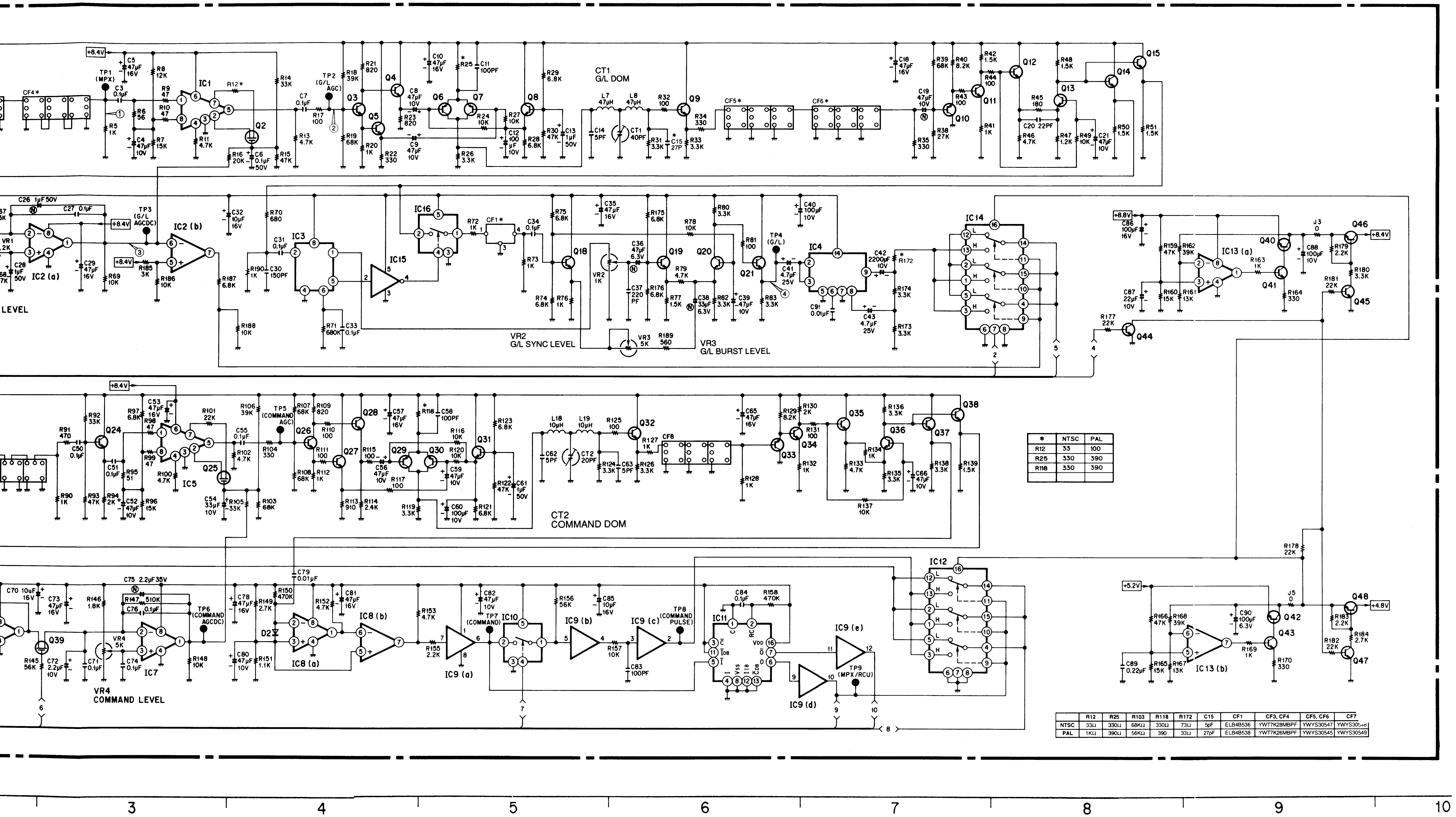
IC1	D3
IC2	C3
IC3	C4
IC4	C7
IC5	B3
IC6	A2
IC7	A3
IC8	A4
IC9	A5, A6, A7
IC10	A5
IC11	A6
IC12	B7
IC13	C9, A9
IC14	C7
IC15	C4
IC16	D5
Q1	D2
Q2	D4
Q3	D4
Q4	D4
Q5	D4
Q6	D5
Q7	D5
Q8	D5
Q9	D6
Q10	D7
Q11	D7
Q12	D8
Q13	D8
Q14	D8
Q15	D8
Q16	D2
Q17	C2
Q18	C5
Q19	C6
Q20	C6
Q21	C6
Q23	B2
Q24	B3
Q25	B3
Q26	B4
Q27	B4
Q28	B4
Q29	B4
Q30	B5
Q31	B5
Q32	B6
Q33	B6
Q34	B7
Q35	B7
Q36	B7
Q37	B7
Q38	C7
Q39	A3
Q40	C9
Q41	C9
Q42	Q9
Q43	A9
Q44	C8
Q45	C9
Q46	C9
Q47	A9
Q48	B9
D1	C2
D2	A4


DEMODULATOR BOARD
CN1
1 +8.8V IN
2 +8.8V IN
3 +8.8V IN
4 +8.8V IN
5 +5.2V IN
6 +5.2V IN
7 +5.2V IN
8 +5.2V IN
9 GROUND
10 GROUND
11 GROUND
12 NOT USED
13 RXD IN
14 NOT USED
15 -5V IN
16 -5V IN
17 -5V IN
18 -5V IN
19 NOT USED
20 MPX/RCU IN
21 NOT USED
22 GEN-LOCK OUT
23 GROUND
24 GROUND
25 NOT USED
26 GROUND
27 GROUND
28 NOT USED
29 GROUND
30 GROUND
31 SAMPLE PULSE IN
32 GROUND
33 GROUND
34 DATA CANCEL IN
35 GROUND
36 GROUND
37 GROUND
38 RXD OUT
39 GROUND
40 GROUND
41 MPX IND 1 OUT
42 MPX IND 2 OUT
43 GROUND
44 GROUND
45 MPX IN
46 GROUND
47 GROUND
48 GROUND
49 GROUND
50 GROUND
TO MOTHER BOARD -----CN4
+8.8V
+5.2V
+4.8V
+8.4V
TP1 (MPX)
TP2 (G/L AGC)
TP3 (G/L AGCDC)
TP4 (G/L)
TP5 (COMMAND AGC)
TP6 (COMMAND AGCDC)
TP7 (COMMAND)
TP8 (COMMAND PULSE)
TP9 (MPX/RCU)
TP10 (GROUND)
CT1 G/L DOM
CT2 COMMAND DOM
VR1 G/L LEVEL
VR2 G/L SYNC LEVEL
VR3 G/L BURST LEVEL
VR4 COMMAND LEVEL
IC1
IC2 (a)
IC2 (b)
IC3
IC4
IC5
IC6
IC7
IC8 (a)
IC8 (b)
IC9 (a)
IC9 (b)
IC9 (c)
IC9 (d)
IC9 (e)
IC10
IC11
IC12
IC15
IC16
CF1*
CF2
CF3*
CF4*
CF5*
CF6*
CF7*
CF8
D
C
B
A
1
2
3
4
5
6
7

Note: The value indicated in th

☐ ☐ ☐
Multiplier (0 - 5)
2nd. Significant
1st. Siginificant

SCHEMATIC DIAGRAM OF DEMODULATOR BOARD (WV-PS550)


+8.4V
TP1 (MPX)
CF4*
IC1
Q2
TP2 (G/L AGC)
Q3
Q4
Q5
Q6
Q7
Q8
CT1 G/L DOM
L7 47μH
L8 47μH
Q9
CF5*
CF6*
Q10
Q11
Q12
Q13
Q14
Q15
TP3 (G/L AGCDC)
IC2 (a)
IC2 (b)
LEVEL
IC3
IC16
IC5
CF1*
Q18
Q19
Q20
Q21
TP4 (G/L)
IC4
IC14
VR2 G/L SYNC LEVEL
VR3 G/L BURST LEVEL
+8.8V
IC13 (a)
Q40
Q41
Q44
Q45
Q46
+8.4V
TP5 (COMMAND AGC)
Q24
Q25
Q26
Q27
Q28
Q29
Q30
Q31
L18 10μH
L19 10μH
Q32
CF8
Q33
Q34
Q35
Q36
Q37
Q38
CT2 COMMAND DOM
TP6 (COMMAND AGCDC)
Q39
VR4 COMMAND LEVEL
IC7
D2
IC8 (a)
IC8 (b)
IC9 (a)
TP7 (COMMAND)
IC10
IC9 (b)
IC9 (c)
TP8 (COMMAND PULSE)
IC11
IC9 (d)
IC9 (e)
TP9 (MPX/RCU)
IC12
+5.2V
IC13 (b)
Q42
Q43
Q47
Q48
+4.8V
3
4
5
6
7
8
9
10

*	NTSC	PAL
R12	33	100
R25	330	390
R118	330	390

	R12	R25	R103	R118	R172	C15	CF1	CF3, CF4	CF5, CF6	CF7
NTSC	33Ω	330Ω	68KΩ	330Ω	73Ω	5pF	ELB4B536	YWT7K28MBPF	YWYS30547	YWYS30548
PAL	1KΩ	390Ω	56KΩ	390	33Ω	27pF	ELB4B538	YWT7K26MBPF	YWYS30545	YWYS30549

Note: **The value indicated in the schematic diagram should be read as follows:**

□ □ □
Multiplier (0 - 5)
2nd. Significant Digit (0 - 9)
1st. Siginificant Digit (1 - 9)

<Example>

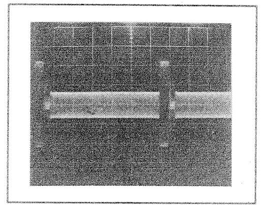
For Resistor:
330 → 33×10^0 = 33 Ω
561 → 56×10^1 = 560 Ω
123 → 12×10^3 = 12k Ω
0R00 = 0 Ω

For Capacitor:
820 → 82×10^0 = 82 pF
102 → 10×10^2 = 1000 pF = 0.001 μF
104 → 10×10^4 = 100000 pF = 0.1 μF
The suffix attached to capacitance indicates a type of capacitor.

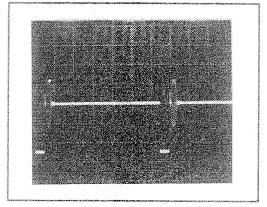
CONDUCTOR VIEW OF DEMODULATOR BOARD (WV-PS550)

<Waveform>

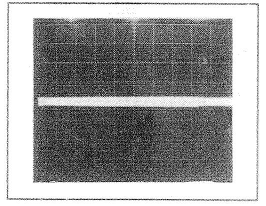
1. 10µsec/DIV, 0.1V/DIV



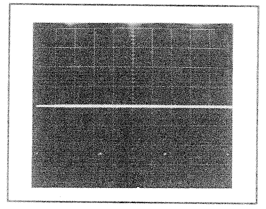
2. 10µsec/DIV, 0.2V/DIV



3. 2msec/DIV, 0.1V/DIV



4. 5msec/DIV, 2V/DIV



<Voltages>

	IC1	IC2	IC3	IC4	IC5	IC6	IC7	IC8	IC9	IC10	IC11	IC12	IC13	IC14	IC15	IC16
Pin 1	5.0	7.2	0	1.6	3.3	1.8	3.6	0	4.9	4.9	0	4.9	0	0	0	0.7
2	3.9	2.2	1.5	1.2	2.6	1.8	41.8	1.8	4.9	0	4.9	5.1	2.1	0	4.9	3.1
3	0	3.3	0	1.2	0	1.8	3.0	1.4	4.9	0	4.9	4.9	2.1	0	0	0
4	6.2	0	0	2.4	6.3	0	0	0	4.9	4.9	0	51	0	0	0	0
5	0	6.7	0.3	0	6.4	1.8	0	1.4	4.9	4.9	4.9	5.1	1.2	0	4.9	4.9
6	0	7.2	1.2	2.4	8.6	0	0	0	4.9		0	0	1.2	0		
7	4.6	0	0	0	2.6	4.7	3.6	4.9	4.9		4.9	0	2.1	-5.0		
8	4.6	8.6	4.9	1.3	0	4.9	4.9	4.9	0		0	0	8.7	0		
9				1.0					0		4.9	0		0.4		
10				1.7					0		0	0		0		
11				1.					4.9		4.9	0		0		
12				0.1					4.9		0	5.1		0.4		
13				0					0		0	4.9		0		
14				0					0.7		4.9	5.1		0		
15									0		0	5.1		0		
16									0		4.9	5.1		5.1		

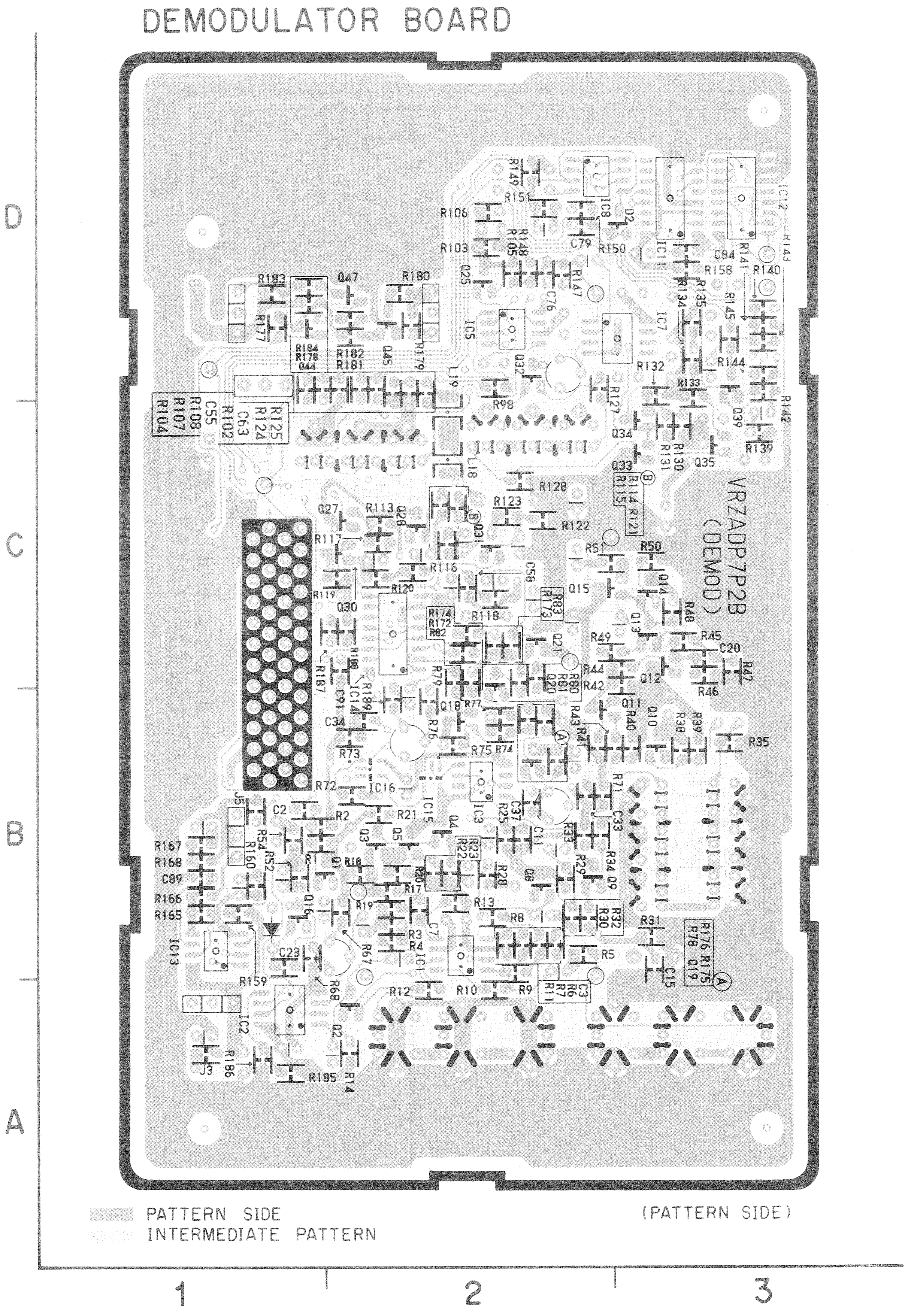
	B	C	E
Q 1	2.5	4.9	1.7
2	3.9	4.6	0
3	2.7	3.3	1.9
4	3.3	4.9	2.6
5	1.9	4.9	1.2
6	3.8	2.3	4.5
7	3.8	2.3	4.5
8	4.3	4.9	3.7
9	2.3	4.9	1.7
10	1.5	0	2.1
11	2.1	2.8	1.4
12	2.8	4.9	2.2
13	2.7	3.7	2.0
14	3.7	4.9	3.1
15	3.7	4.9	3.1
16	2.1	4.9	1.6
17	1.5	0	2.2
18	2.4	4.9	1.7
19	2.4	4.9	1.7
20	2.3	3.3	1.6
21	3.3	4.9	2.0

	B	C	E
23	2.6	4.9	1.9
24	2.7	4.9	1.9
25	2.6	3.2	2.6
26	2.0	0	1.3
27	1.3	4.9	0.6
28	3.9	4.9	3.1
29	3.6	2.9	0
31	4.3	4.9	3.6
33	1.1	0	1.8
34	1.8	2.6	1.1
35	2.6	4.9	2.0
36	2.6	0	1.9
37	3.5	4.9	2.9
38	3.5	4.9	2.8
39	1.8	0	1.8
41	0.7	8.1	0.1
44	0	0	0
45	0.6	0	0
46	8.0	8.6	8.7
47	0.6	0	0
48	0	4.9	5.0

< Index>

DEMODULATOR BOARD PATTERN SIDE

IC1	B2
IC2	A1
IC3	B2
IC5	D2
IC7	D2,D3
IC8	D2
IC11	D3
IC12	D3
IC13	B1
IC14	C2
IC15	B2
IC16	B2
Q1	B1
Q2	A2
Q3	B2
Q4	B2
Q5	B2
Q8	B2
Q9	B2
Q10	B3
Q11	B2
Q12	C3
Q13	C3
Q14	C3
Q15	C2
Q16	B2
Q18	B2
Q19	B2
Q20	C2
Q21	C2
Q25	D2
Q27	C1,C2
Q28	C2
Q30	C1,C2
Q31	C2
Q32	D2
Q33	C3
Q34	C3
Q35	C3
Q39	D3
Q44	D1
Q45	D2
Q47	D2
D2	D2,D3


DEMODULATOR BOARD
VRZADP7P2B
(DEMOD)
D
C
B
A
1
2
3
PATTERN SIDE
INTERMEDIATE PATTERN
(PATTERN SIDE)
IC1
IC2
IC3
IC5
IC7
IC11
IC12
IC13
IC14
IC15
IC16
J3
J5
R104
R107
R108
C55
C63
R102
R124
R125
R167
R168
C89
R166
R165
R159
R185
R186
R183
R177
R180
R106
R103
R149
R151
R148
R105
C79
R150
C84
R141
R140
R158
R132
R133
R144
R139
R142
R128
R123
R122
R113
R117
R116
R119
R120
R118
R98
R50
R51
R49
R45
R44
R42
R46
R47
R35
R31
R5
R13
R12
R10
R9
C15
C20
C23
C34
C37
C11
C33
C2
Q10
Q11
Q12
Q13
Q14
Q15
Q16
Q18
Q20
Q21
Q25
Q27
Q28
Q30
Q31
Q32
Q33
Q34
Q35
Q39
Q45
Q47

< Index>

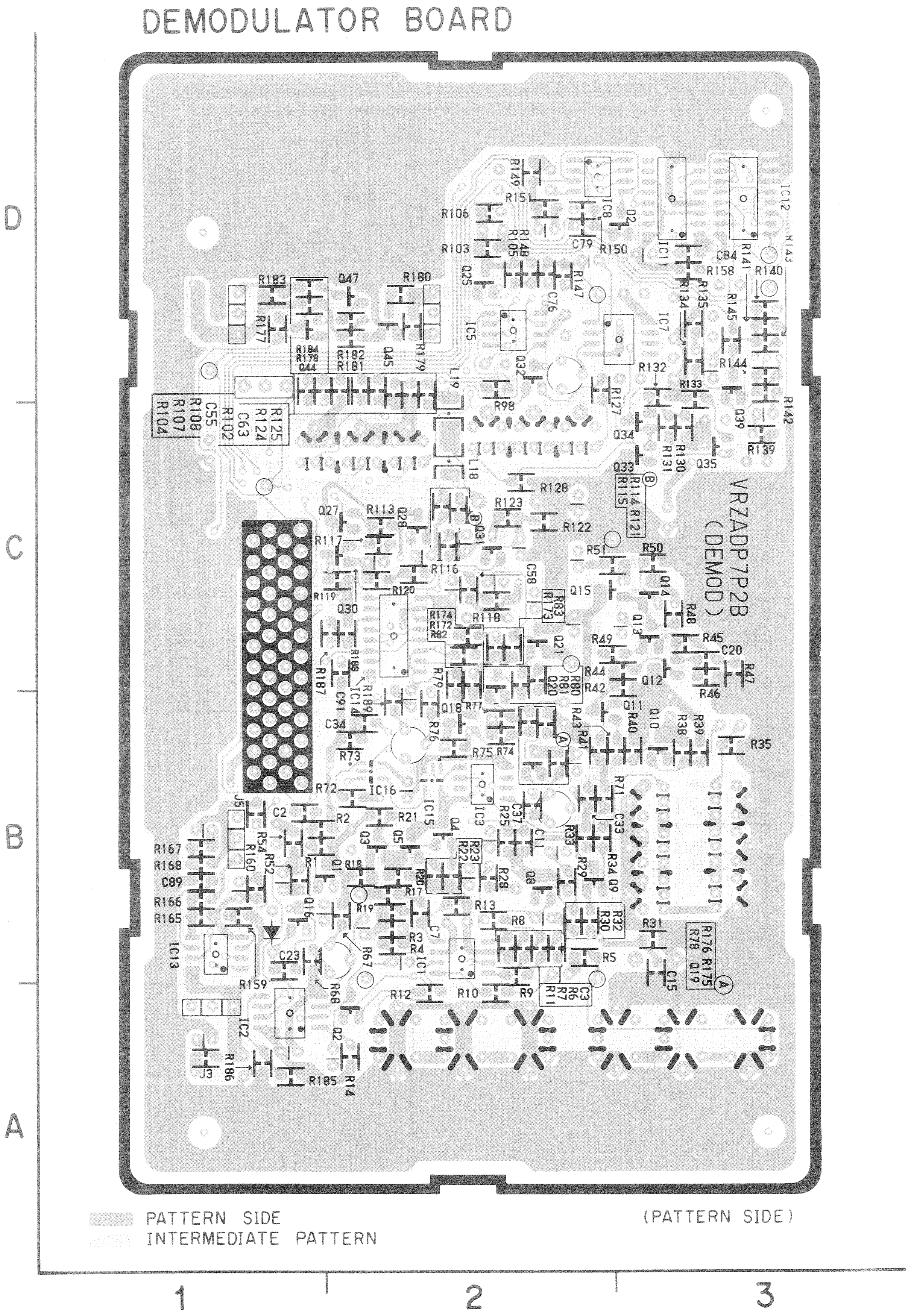
DEMODULATOR BO COMPONENT SIDE

IC4	C2
IC6	D1
IC9	D1
IC10	D1
Q6	B2
Q7	B2
Q17	B2
Q23	D2
Q24	D2
Q26	C2
Q29	C2
Q36	D1
Q37	C1,D1
Q38	C1
Q40	B3
Q41	B3
Q42	B3
Q43	B3
Q46	D2
Q48	D3
D1	B3

CONDUCTOR VIEW OF DEMODULATOR BOARD (WV-PS550)

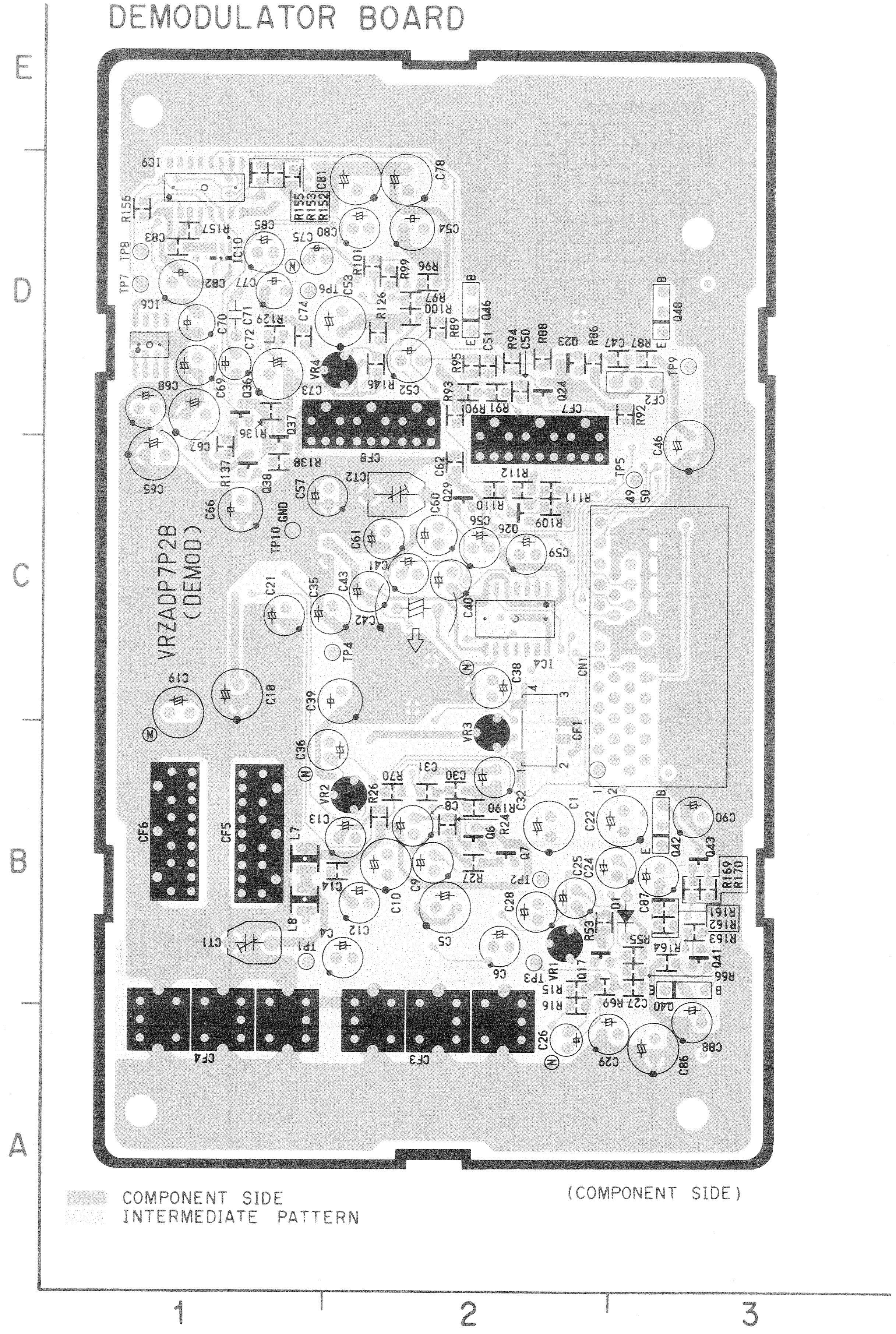
ndex>
EMODULATOR BOARD
ATTERN SIDE

1	B2
2	A1
3	B2
5	D2
7	D2,D3
3	D2
11	D3
12	D3
13	B1
14	C2
15	B2
16	B2
	B1
	A2
	B2
	B2
	B2
	B2
	B2
0	B3
1	B2
2	C3
3	C3
4	C3
5	C2
6	B2
8	B2
9	B2
20	C2
21	C2
25	D2
27	C1,C2
28	C2
30	C1,C2
31	C2
32	D2
33	C3
34	C3
35	C3
39	D3
4	D1
5	D2
7	D2
	D2,D3


DEMODULATOR BOARD
D
C
B
A
1
2
3
VRZADP7P2B
(DEMOD)
PATTERN SIDE
INTERMEDIATE PATTERN
(PATTERN SIDE)

< Index>
DEMODULATOR BOARD
COMPONENT SIDE

IC4	C2
IC6	D1
IC9	D1
IC10	D1
Q6	B2
Q7	B2
Q17	B2
Q23	D2
Q24	D2
Q26	C2
Q29	C2
Q36	D1
Q37	C1,D1
Q38	C1
Q40	B3
Q41	B3
Q42	B3
Q43	B3
Q46	D2
Q48	D3
D1	B3


DEMODULATOR BOARD
E
D
C
B
A
1
2
3
VRZADP7P2B
(DEMOD)
COMPONENT SIDE
INTERMEDIATE PATTERN
(COMPONENT SIDE)

SCHEMATIC DIAGRAM OF POWER BOARD (WV-PS550)

POWER BOARD

	IC1	IC2	IC3	IC4	IC5
Pin 1	0	-	-		13.7
2	0	0	0		10.4
3	0.1	0	0		10.3
4		-	-		0
5		0	0	6.0	10.3
6					10.3
7					10.3
8					6.3

	B	C	E
Q3	0.7	0	0
4	0	103.1	0
5	103.2	0	103.2
6	89.2	59.3	89.4
7	0	1.9	0
8	59.3	89.2	89.2
101	89.7	103.4	89.0

Power Supply Board <Voltage>

PIN	IC1	IC2	PC1	PC2
1	7.9	2.4	0.2	11.9
2	1.6	0	-0.1	10.9
3	1.6	10.5	1.6	1.5
4	1.6		15.5	7.7
5	6.2			
6	15.6			
7	1.6			

	G	D	S
Q1	6.2	88.2	1.7

Note: **The value indicated in the schematic diagram should be read as follows:**

□ □ □
- Multiplier (0 - 5)
- 2nd. Significant Digit (0 - 9)
- 1st. Siginificant Digit (1 - 9)

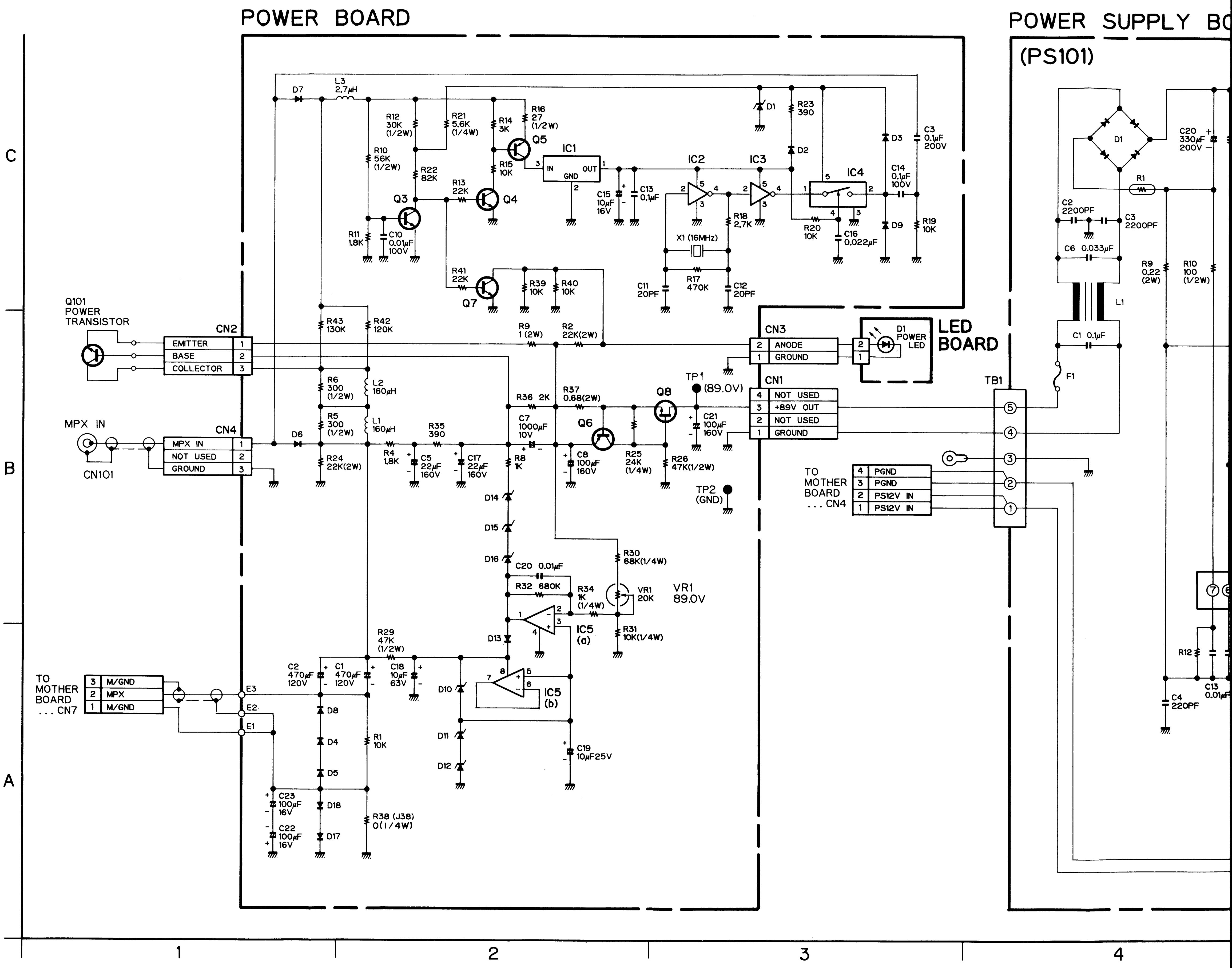
<Example>

For Resistor:

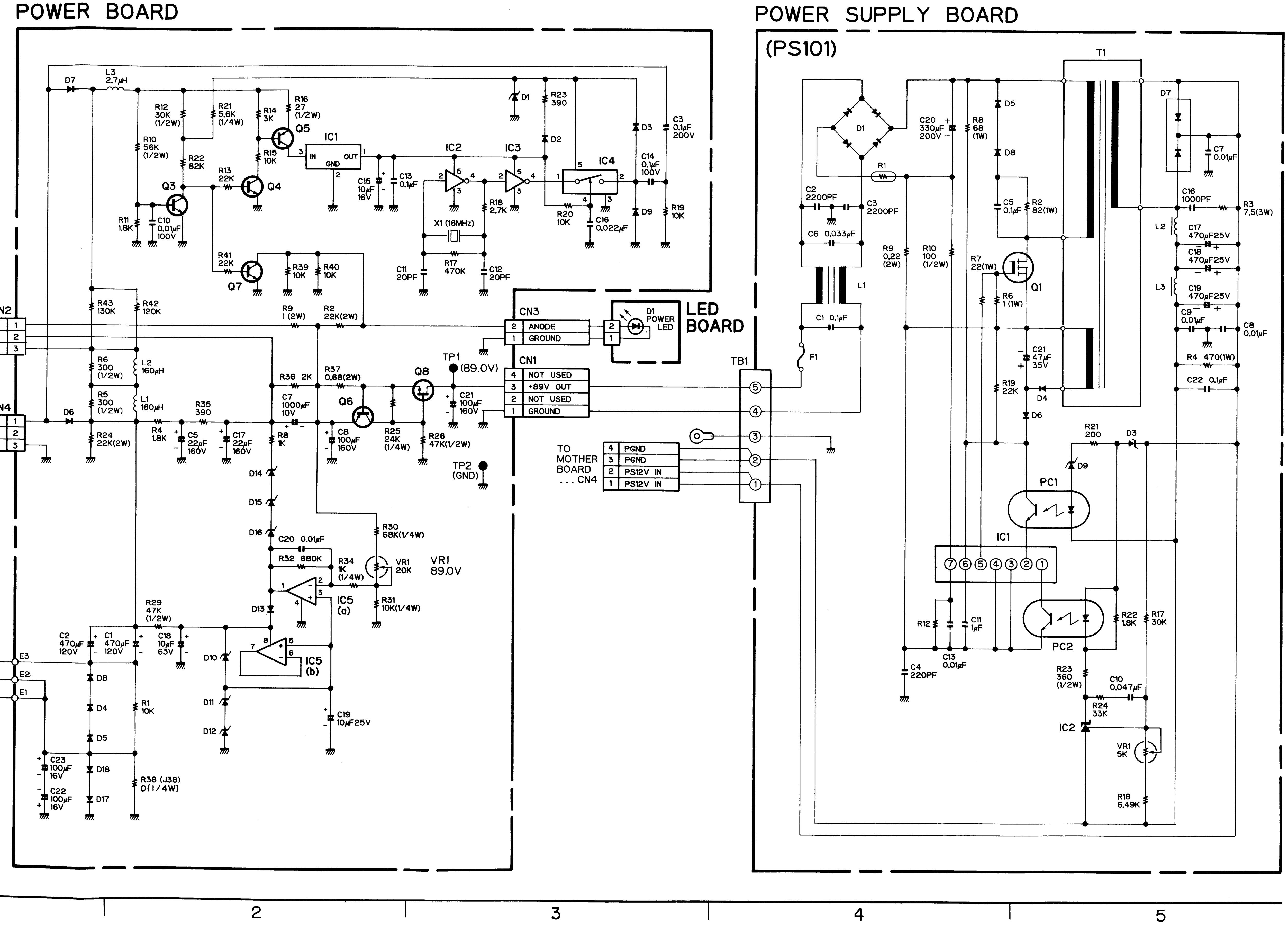
330 → 33 x 10^0 = 33 Ω
561 → 56 x 10^1 = 560 Ω
123 → 12 x 10^3 = 12k Ω
0R00 = 0 Ω

For Capacitor:

820 → 82 x 10^0 = 82 pF
102 → 10 x 10^2 = 1000 pF = 0.001 µF
104 → 10 x 10^4 = 100000 pF = 0.1 µF
The suffix attached to capacitance indicates a type of capacitor.


POWER BOARD
POWER SUPPLY BO
(PS101)
C
B
A
1
2
3
4
D7
L3 2.7µH
R12 30K (1/2W)
R21 5.6K (1/4W)
R14 3K
R16 27 (1/2W)
Q5
IC1
IN OUT GND
R10 56K (1/2W)
R22 82K
R15 10K
R13 22K
Q3
Q4
R11 1.8K
C10 0.01µF 100V
C15 10µF 16V
C13 0.1µF
IC2
IC3
IC4
D1
R23 390
D2
D3
C3 0.1µF 200V
C14 0.1µF 100V
D9
R19 10K
R18 2.7K
X1 (16MHz)
R20 10K
C16 0.022µF
R17 470K
C11 20PF
C12 20PF
R41 22K
Q7
R39 10K
R40 10K
Q101 POWER TRANSISTOR
CN2
EMITTER
BASE
COLLECTOR
R43 130K
R42 120K
R9 1 (2W)
R2 22K(2W)
CN3
ANODE
GROUND
D1 POWER LED
LED BOARD
R6 300 (1/2W)
L2 160µH
R5 300 (1/2W)
L1 160µH
R36 2K
R37 0.68(2W)
TP1 (89.0V)
Q8
C21 100µF 160V
CN1
NOT USED
+89V OUT
NOT USED
GROUND
MPX IN
CN101
CN4
MPX IN
NOT USED
GROUND
D6
R35 390
R4 1.8K
C5 22µF 160V
C17 22µF 160V
C7 1000µF 10V
Q6
R8 1K
C8 100µF 160V
R25 24K (1/4W)
R26 47K(1/2W)
TP2 (GND)
R24 22K(2W)
TO MOTHER BOARD ... CN4
PGND
PGND
PS12V IN
PS12V IN
TB1
D14
D15
D16
C20 0.01µF
R32 680K
R34 1K (1/4W)
R30 68K(1/4W)
VR1 20K
VR1 89.0V
R31 10K(1/4W)
IC5 (a)
D13
R29 47K (1/2W)
TO MOTHER BOARD ... CN7
M/GND
MPX
M/GND
E3
E2
E1
C2 470µF 120V
C1 470µF 120V
C18 10µF 63V
D10
IC5 (b)
D8
D4
D5
R1 10K
D11
D12
C19 10µF25V
C23 100µF 16V
C22 100µF 16V
D18
D17
R38 (J38) 0(1/4W)
D1
C20 330µF 200V
R1
C2 2200PF
C3 2200PF
C6 0.033µF
R9 0.22 (2W)
R10 100 (1/2W)
L1
C1 0.1µF
F1
R12
C4 220PF
C13 0.01µF

SCHEMATIC DIAGRAM OF POWER BOARD (WV-PS550)


POWER BOARD
D7
L3 2.7μH
R12 30K (1/2W)
R21 5.6K (1/4W)
R14 3K
R16 27 (1/2W)
Q5
IC1
IN OUT GND
R10 56K (1/2W)
R22 82K
R15 10K
R13 22K
Q3
Q4
R11 1.8K
C10 0.01μF 100V
C15 10μF 16V
C13 0.1μF
IC2
IC3
D1
R23 390
D2
IC4
C3 0.1μF 200V
D3
C14 0.1μF 100V
R18 2.7K
R20 10K
C16 0.022μF
D9
R19 10K
X1 (16MHz)
R17 470K
C11 20PF
C12 20PF
R41 22K
Q7
R39 10K
R40 10K
R43 130K
R42 120K
R9 1 (2W)
R2 22K(2W)
CN3
2 ANODE
1 GROUND
D1 POWER LED
LED BOARD
R6 300 (1/2W)
L2 160μH
R5 300 (1/2W)
L1 160μH
R36 2K
R37 0.68(2W)
Q8
TP1
(89.0V)
C7 1000μF 10V
Q6
C21 100μF 160V
CN1
4 NOT USED
3 +89V OUT
2 NOT USED
1 GROUND
D6
R24 22K(2W)
R4 1.8K
R35 390
C5 22μF 160V
C17 22μF 160V
R8 1K
C8 100μF 160V
R25 24K (1/4W)
R26 47K(1/2W)
TP2 (GND)
D14
D15
D16
C20 0.01μF
R32 680K
R34 1K (1/4W)
R30 68K(1/4W)
VR1 20K
VR1 89.0V
IC5 (a)
R31 10K(1/4W)
D13
R29 47K (1/2W)
C2 470μF 120V
C1 470μF 120V
C18 10μF 63V
IC5 (b)
D10
D11
D12
C19 10μF25V
E3
E2
E1
D8
D4
D5
R1 10K
D18
D17
C23 100μF 16V
C22 100μF 16V
R38 (J38) 0(1/4W)
TO MOTHER BOARD ... CN4
4 PGND
3 PGND
2 PS12V IN
1 PS12V IN
TB1
POWER SUPPLY BOARD
(PS101)
T1
D1
R1
C20 330μF 200V
R8 68 (1W)
D5
D8
C2 2200PF
C3 2200PF
C6 0.033μF
L1
C1 0.1μF
F1
R9 0.22 (2W)
R10 100 (1/2W)
R7 22(1W)
C5 0.1μF
R2 82(1W)
Q1
R6 1 (1W)
C21 47μF 35V
R19 22K
D4
D6
D7
C7 0.01μF
C16 1000PF
R3 7.5(3W)
L2
C17 470μF25V
C18 470μF25V
L3
C19 470μF25V
C9 0.01μF
C8 0.01μF
R4 470(1W)
C22 0.1μF
R21 200
D3
D9
PC1
IC1
7 6 5 4 3 2 1
R12
C11 1μF
C13 0.01μF
C4 220PF
PC2
R22 1.8K
R17 30K
R23 360 (1/2W)
C10 0.047μF
R24 33K
IC2
VR1 5K
R18 6.49K
2
3
4
5

< Index>
POWER BOARD

IC1	C2
IC2	C3
IC3	C3
IC4	C3
IC5	A2, B2
Q3	C2
Q4	C2
Q5	C2
Q6	B2
Q7	C2
Q8	B3
Q101	B1
D1	C3
D2	C3
D3	C3
D4	A1
D5	A1
D6	B1
D7	C1
D8	A8
D9	C3
D10	A2
D11	A12
D12	A2
D13	A2
D14	B2
D15	B2
D16	B2
D17	A1
D18	A1
D101	B3

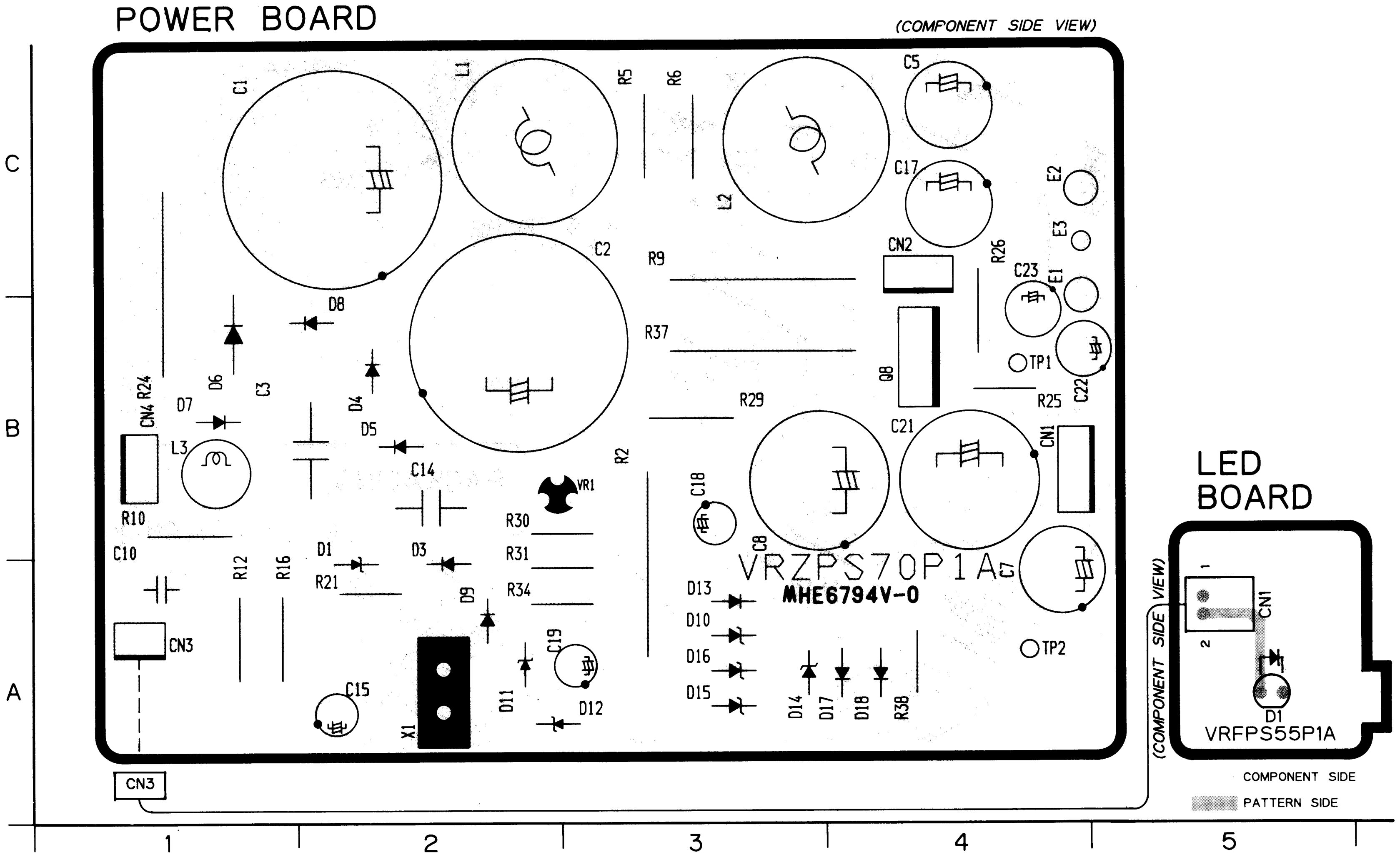
< Index>
POWER SUPPLY BOARD

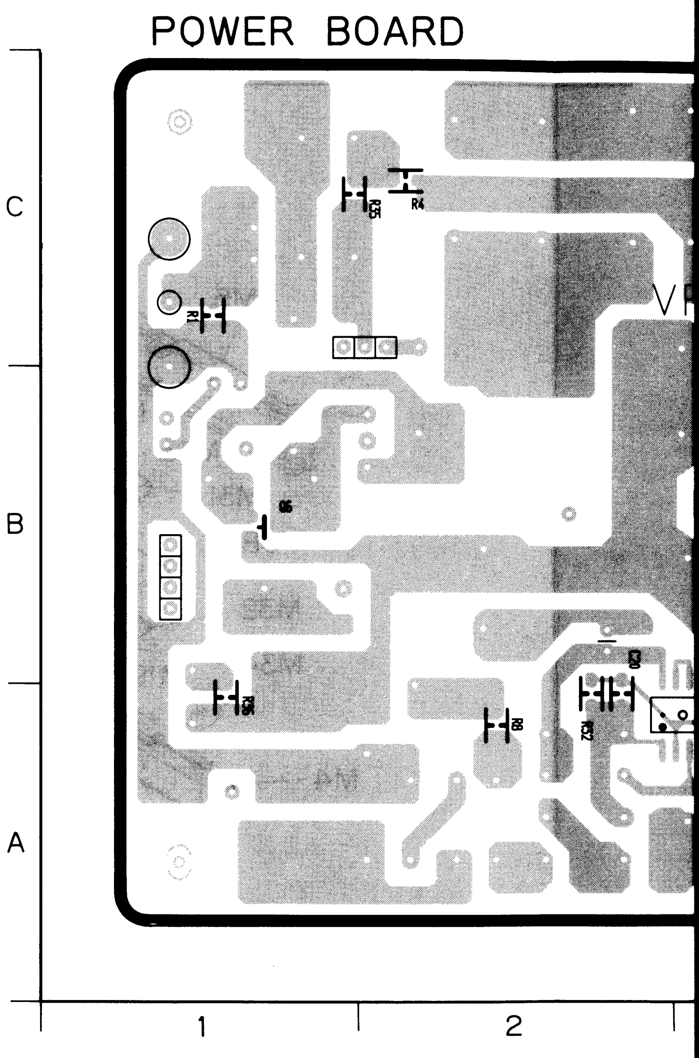
IC1	B4, B5
IC2	A5
Q1	C5
D1	C4
D3	B5
D4	B5
D5	C5
D6	B5
D7	C5
D8	C5
D9	B5
PC1	B5
PC2	A5

< Index>
LED BOARD

D1	B3

CONDUCTOR VIEW OF P


POWER BOARD
(COMPONENT SIDE VIEW)
C
B
A
1
2
3
4
5
C1
L1
R5
R6
C5
C17
L2
E2
E3
C2
R9
CN2
R26
C23
E1
D8
R37
Q8
TP1
C22
R24
CN4
D6
C3
D4
D7
L3
D5
R29
R25
C21
CN1
C14
VR1
R2
C18
R10
C10
R30
R31
R34
C8
C7
R12
R16
D1
R21
D3
D9
VRZPS70P1A
MHE6794V-0
D13
D10
D16
D15
CN3
C19
TP2
C15
X1
D11
D12
D14
D17
D18
R38
LED BOARD
(COMPONENT SIDE VIEW)
1
2
CN1
D1
VRFPS55P1A
COMPONENT SIDE
PATTERN SIDE


POWER BOARD
C
B
A
1
2
R5
R4
R1
Q6
R3
R8

< Index >
POWER BOARD
COMPONENT SIDE

Q8	B4
D1	A2
D3	A2
D4	B2
D5	B2
D6	B1
D7	B1
D8	B2
D9	A2
D10	A3
D11	A2
D12	A2, A3
D13	A3
D14	A3
D15	A3
D16	A3
D17	A4
D18	A4

< Index>
LED BOARD

D1	A5

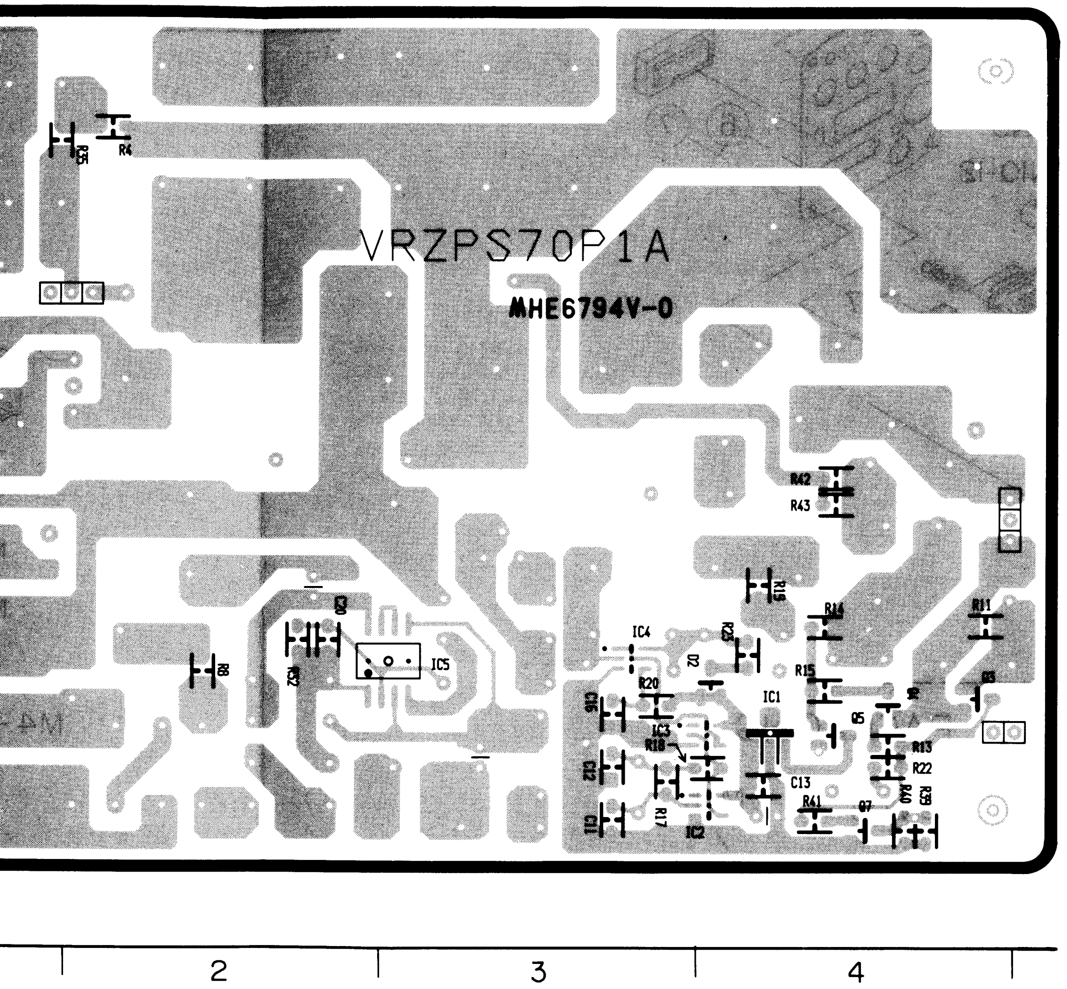
< Index >
POWER BOARD
PATTERN SIDE

IC1	A4
IC2	A4
IC3	A4
IC4	A3
IC5	A2, A3
Q3	A4
Q4	A4
Q5	A4
Q7	A4
D2	A4

TOR VIEW OF POWER BOARD (WV-PS550)

BOARD

(PATTERN SIDE VIEW)

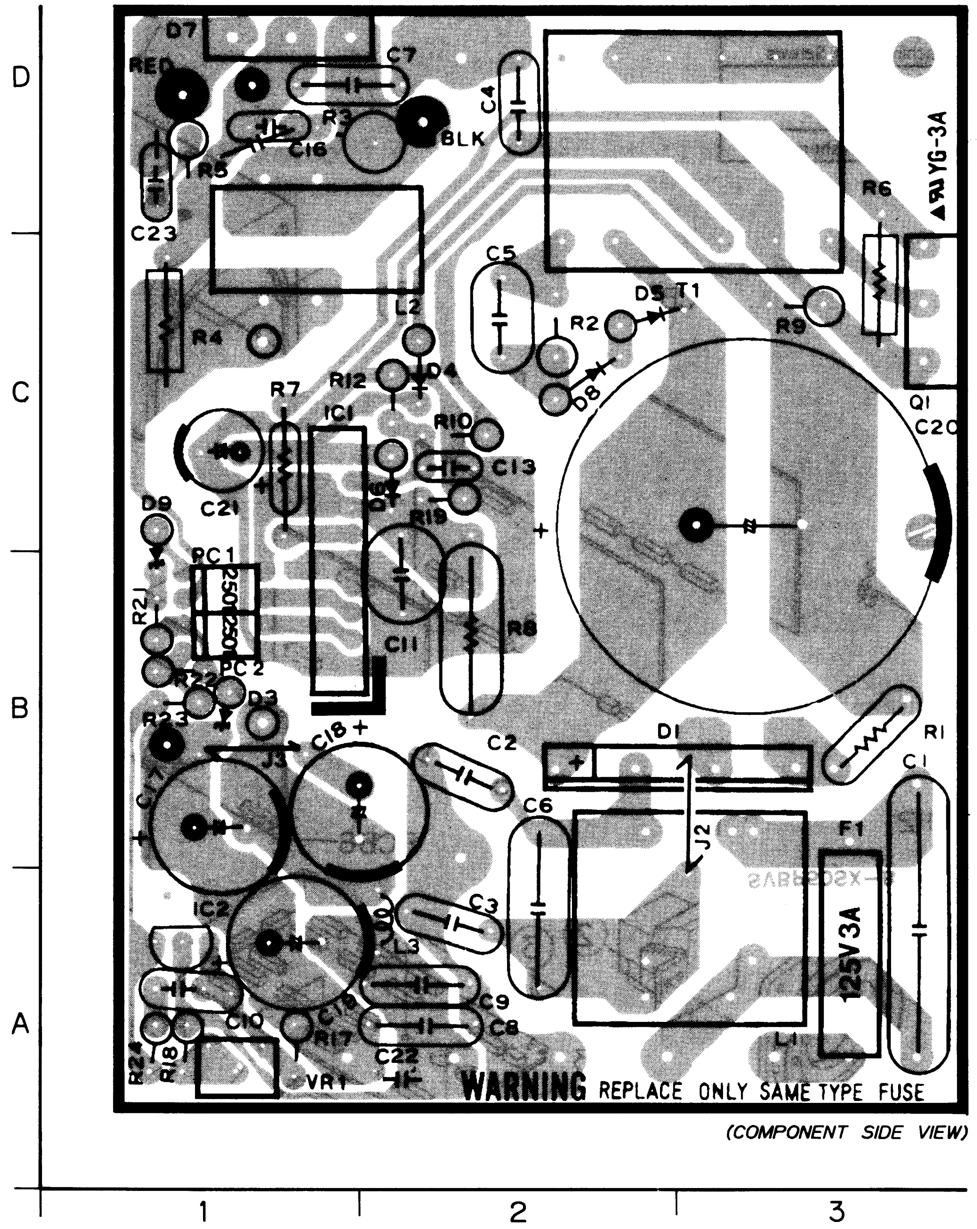


VRZPS70P1A
MHE6794V-0
IC1
IC2
IC3
IC4
IC5
R42
R43
C13
R41
2
3
4

RD
DE

, A3

POWER SUPPLY BOARD



D
C
B
A
1
2
3
D7
RED
C7
C4
BLK
R3
C16
R5
C23
R4
C5
R2
D5
T1
R6
YG-3A
R9
Q1
C20
L2
D4
D8
R12
R7
IC1
R10
C13
C21
D9
D6
R19
PC1
R21
PC2
C11
R8
R22
D3
R23
C18
J3
C17
D1
R1
C2
C1
C6
J2
F1
IC2
C3
L3
L4
C9
C8
C10
R17
C22
R24
R18
VR1
125V3A
L1
WARNING REPLACE ONLY SAME TYPE FUSE

(COMPONENT SIDE VIEW)

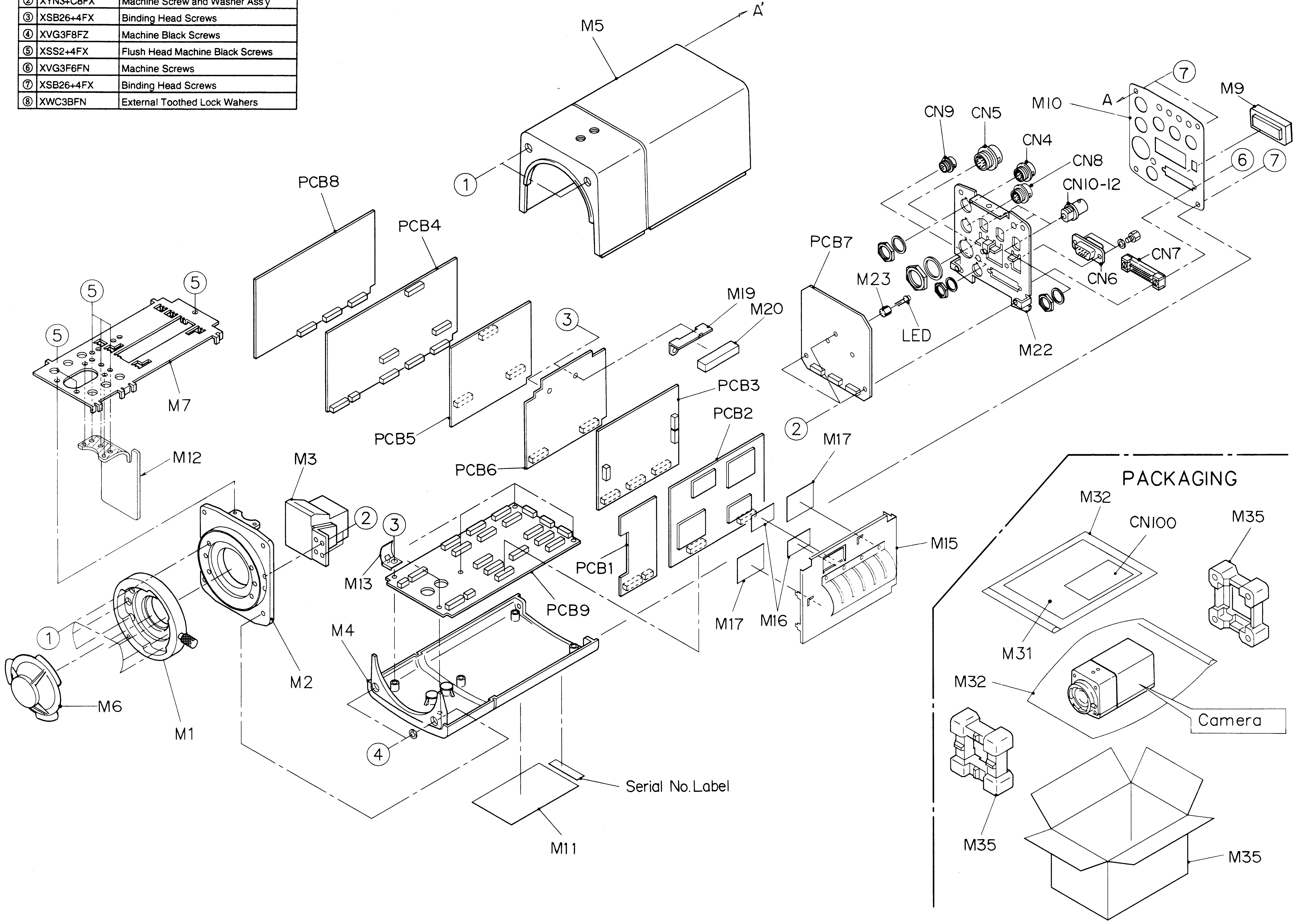
< Index>
POWER SUPPLY BOARD
COMPONENT SIDE

IC1	B1, B2, C1, C2
Q1	C3
D1	B2, B3
D3	B1
D4	C2
D5	C2
D6	C2
D7	D1
D8	C2
D9	C1
PC1	B1
PC2	B1

EXPLODED VIEW (WV-E550E)

○ Numbers shows screws, washers, nuts and etc.

	Screws	Description
①	XSN3+6FN	Binding Head Screws
②	XYN3+C8FX	Machine Screw and Washer Ass'y
③	XSB26+4FX	Binding Head Screws
④	XVG3F8FZ	Machine Black Screws
⑤	XSS2+4FX	Flush Head Machine Black Screws
⑥	XVG3F6FN	Machine Screws
⑦	XSB26+4FX	Binding Head Screws
⑧	XWC3BFN	External Toothed Lock Wahers


A'
M5
①
PCB8
PCB4
⑤
⑤
⑤
M7
M12
PCB5
PCB6
③
M19
M20
PCB3
PCB2
M3
②
③
M13
PCB9
PCB1
M4
④
M2
①
M6
M1
Serial No.Label
M11
M17
M16
M17
M15
②
PCB7
M23
LED
M22
CN9
CN5
CN4
CN8
CN10-12
CN6
CN7
M10
A
⑦
M9
⑥
⑦
PACKAGING
M32
CN100
M35
M31
M32
Camera
M35
M35

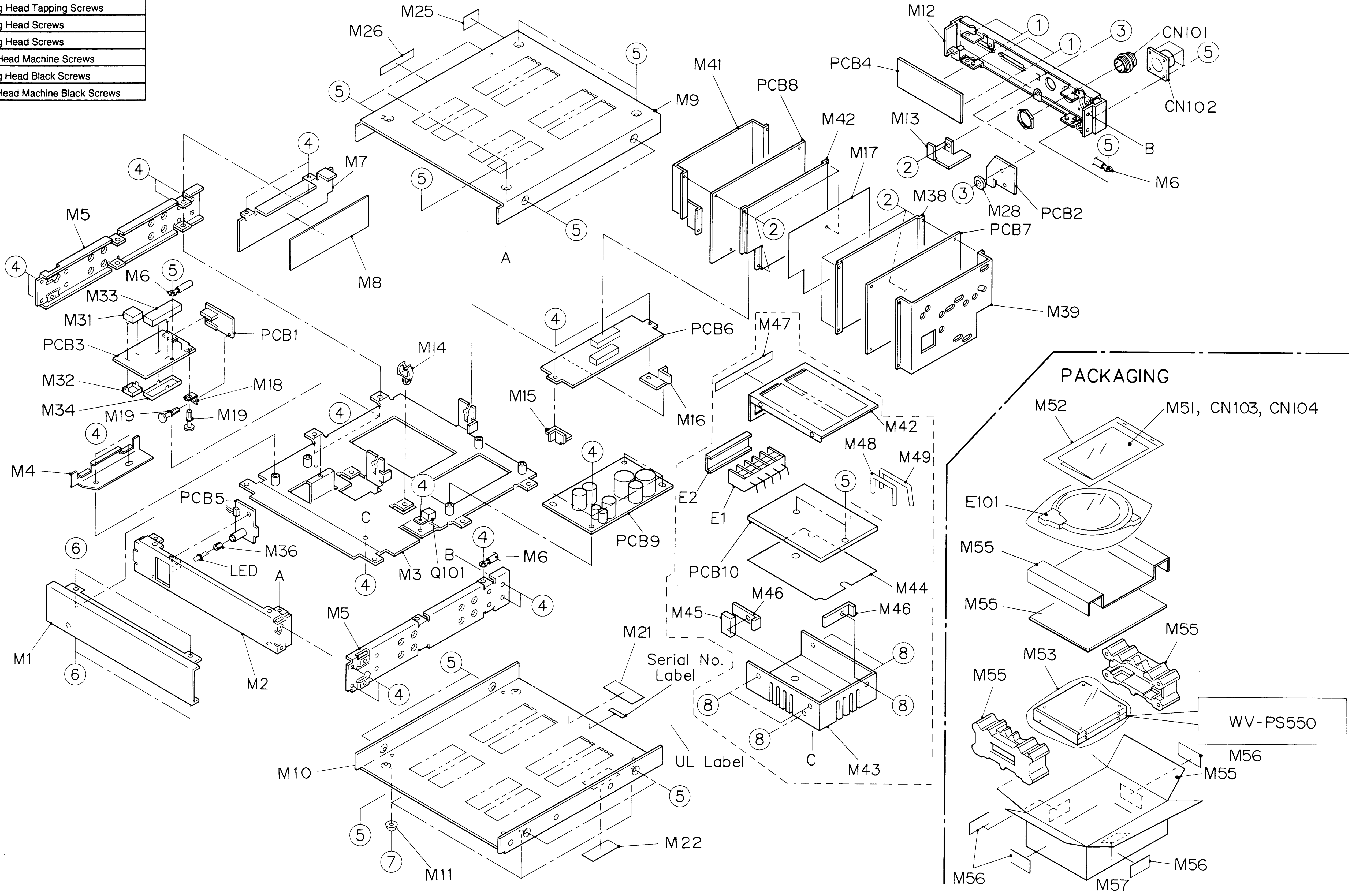
○ Numbers shows screws, washers,

	Screws	De
①	XSB25+6FN	Binding Head S
②	XSB26+4FX	Binding Head S
③	XTB3+6BFN	Binding Head T
④	XSB3+6FX	Binding Head S
⑤	XSB3+6FN	Binding Head S
⑥	XSS26+6FN	Flush Head Mac
⑦	XSB3+12FXK	Binding Head Bl
⑧	XSS3+6FXK	Flush Head Mac

EXPLODED VIEW (WV-PS550)

○ Numbers shows screws, washers, nuts and etc.

	Screws	Description
①	XSB25+6FN	Binding Head Screws
②	XSB26+4FX	Binding Head Screws
③	XTB3+6BFN	Binding Head Tapping Screws
④	XSB3+6FX	Binding Head Screws
⑤	XSB3+6FN	Binding Head Screws
⑥	XSS26+6FN	Flush Head Machine Screws
⑦	XSB3+12FXK	Binding Head Black Screws
⑧	XSS3+6FXK	Flush Head Machine Black Screws


M25
M26
⑤
M9
⑤
④
M7
M8
A
⑤
⑤
M41
PCB8
M42
M17
M12
①
①
③
CN101
⑤
CN102
PCB4
M13
②
B
⑤
M6
②
②
M38
③
M28
PCB2
PCB7
M39
④
M5
④
⑤
M6
M33
M31
PCB3
PCB1
M32
M34
M18
M19
M19
④
M4
M14
④
M15
④
PCB6
M16
M47
M42
④
PCB9
M48
M49
E2
E1
⑤
PCB10
M44
PCB5
M36
LED
④
C
④
M3
Q101
B
④
M6
④
⑥
A
M1
⑥
M2
M5
④
M45
M46
M46
M21
Serial No. Label
⑧
⑧
⑧
⑧
C
M43
UL Label
⑤
M10
⑤
⑤
⑦
M11
M22
PACKAGING
M52
M51, CN103, CN104
E101
M55
M55
M55
M53
M55
WV-PS550
M56
M55
M56
M57
M56

REPLACEMENT PARTS LIST

Important Notice

1. Components identified by " ⚠ " mark have special characteristics important for safety.
   When replacing any of these components, use only manufacturer's specified parts.
2. RTL : Retention Time Limited.

COLOUR VIDEO CAMERA WV-E550E

MISCELLANEOUS

REF.NO.	PART NO.	DESCRIPTION
M1	YWV0EA0284AN	Bayonet Mont Assy
M2	YWV2KA0862B2	Optical Chassis
M3	YWV0EA0307AN	Optical Head Assy
M4	YWV5KA1330B1	Bottom Case
M5	YWV5KA1329A1	Upper Case
M6	CAP410A	Body Cap
M7	YWV2CA0385B2	Hold Plate
M9	YWPCSE28CU	Connector Cap
M10	YWV6GA0259A3	Rear Panel
M11 ⚠	YWV7QA3240A4	Main Label
M12	YWV7DA0387A3	Heat sink
M13	YWV4JA0483A4	Spring Plate
M20	YWV2FA0657A4	Rubber Cushion for Heat Sink

DRIVE BOARD

REF.NO.	PART NO.	DESCRIPTION	
PCB1 (RTL)	YWVKBE550E1A	Printed Circuit Board Assy	
IC3	MN5197	IC	
IC7	YWTC7W04FUL	IC	
IC8	YWTC7S08F	IC	
IC9	YWCXD1265R	IC	
IC11	TC74HC4050AF	IC	
IC12	UPD74HC4049G	IC	
IC15	TC74HC4050AF	IC	
IC16	YWTC7S86F	IC	
IC17	YWTC7S32F	IC	
IC18	YWTC7W74F	IC	
IC19	YWTC7WU04F	IC	
Q1	2SK662-PQR	FET	
Q2-4	2SB1218A-QR	Transistor	
Q5	2SC4176	Transistor	
Q6	2SA1610	Transistor	
Q7-9	2SD1819-QRS	Transistor	
D1,2	MA372	Diode	
D3	MA121	Diode	
D4,5	MA143	Diode	
D6	MA121	Diode	
D7,8	MA141K	Diode	
R1	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R2	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R3	ERJ3GEYJ752	Carbon	7.5Kohms 1/16W
R4	ERJ3GEYJ302	Carbon	3K ohms 1/16W
R5,6	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R8	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R26,52	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R65	ERJ3GEYJ100	Carbon	10 ohms 1/16W
R69	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R71	ERJ3GEYJ105	Carbon	1M ohms 1/16W
R75	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R81-83	ERJ3GEYJ470	Carbon	47 ohms 1/16W
R84	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R87-89	ERJ3GEYJ470	Carbon	47 ohms 1/16W
R92-94	ERJ3GEYJ470	Carbon	47 ohms 1/16W
R95-97	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R98-100	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R101	ERJ3GEYJ100	Carbon	10 ohms 1/16W
R105	ERJ3GEY0R00	Carbon	0 ohms 1/16W

REF.NO.	PART NO.	DESCRIPTION
R106	YWR0816R393D	Metal 39K ohms 1/16W
R107-109	ERJ3GEYJ104	Carbon 100K ohms 1/16W
R133,143	ERJ3GEYJ470	Carbon 47 ohms 1/16W
R150,151	ERJ3GEYJ470	Carbon 47 ohms 1/16W
R152,153	ERJ3GEY0R00	Carbon 0 ohms 1/16W
R154	YWR0816P102D	Metal 1K ohms 1/16W
R155	YWR0816P103D	Metal 10K ohms 1/16W
R156	YWR0816P271D	Metal 270 ohms 1/16W
R157	YWR0816P331D	Metal 330 ohms 1/16W
R158	ERJ3GEY0R00	Carbon 0 ohms 1/16W
R159	YWR0816P201D	Metal 200 ohms 1/16W
R160	ERJ3GEY0R00	Carbon 0 ohms 1/16W
R162	ERJ3GEYJ102	Carbon 1K ohms 1/16W
R163	ERJ3GEYJ151	Carbon 150 ohms 1/16W
R164	ERJ3GEYJ103	Carbon 10K ohms 1/16W
R165	ERJ3GEYJ331	Carbon 330 ohms 1/16W
R166	ERJ3GEYJ105	Carbon 1M ohms 1/16W
VR1-3	EVM7JGA30B15	Variable Resistor 100K ohms
VR4-6	EVM7JSW30B25	Variable Resistor 200K ohms
C1	SK21C225KRA	Electrolytic 2.2 µF 16V
C2	YW5F104Z2VB	Ceramic 0.1 µF
C3	YW5CH221J5VB	Ceramic 220 pF
C4	YW5F104Z2VB	Ceramic 0.1 µF
C5	YW5CH221J5VB	Ceramic 220 pF
C8,10	SK21A476KRD0	Electrolytic 47 µF 10V
C13-15	YW5F104Z2VB	Ceramic 0.1 µF
C16-18	ECEV1CV100	Electrolytic 10 µF 16V
C19-21	YW5F104Z2VB	Ceramic 0.1 µF
C22	SK21A476KRD0	Electrolytic 47 µF 10V
C23-25	ECEV1EV100	Electrolytic 10 µF 25V
C44	YW5X102K5VB	Ceramic 1000 pF
C45	SK21A476KRD0	Electrolytic 47 µF 10V
C46	YW5CH100J5VB	Ceramic 10 pF
C47	YW5F104Z2VB	Ceramic 0.1 µF
C48	YW5CH330J5VB	Ceramic 33 pF
C49	YW5F104Z2VB	Ceramic 0.1 µF
C50,52	YW5CH220J5VB	Ceramic 22 pF
C54,55	YW5F104Z2VB	Ceramic 0.1 µF
C56,57	YW5CH220J5VB	Ceramic 22 pF
C60	YW5X102K5VB	Ceramic 1000 pF
L1	EIC4EJ010E	Coil 1 µH
L2	YWNL32150J	Coil 15 µH
CN1	YW522052690	26-pin Connector
CN2	YW51756394	24-pin Connector
CN3	YW41756392	12-pin Connector
TP1-8	YWRCT2125TPV	Test Point

REF.NO.	PART NO.	DESCRIPTION
DIGITAL PROCESS BOARD		
PCB2 (RTL)	YWVKCE550E1A	Printed Circuit Board Assy
IC1	YWVC5776	LSI
IC2	YWVC5727	LSI
IC3	YWVC5777A	LSI
IC4	YWVC5778	LSI
IC5	NJM2904M	IC
IC6-8	YWCXD1175AM	IC
IC9	YWTC74AC04AF	IC
IC10	YWHD74AC164F	IC
IC11	YWTC74AC00F	IC
IC12	YWTC74AC08F	IC
IC14	YWTC7S32F	IC
IC15	YWTC74AC74F	IC
IC16	YWTC74AC08F	IC
IC17-20	YWMN6557AS	IC
IC21	YWTC4S66FR	IC
IC22	YWTC7S08F	IC
Q1	2SB956-RS	Transistor
Q2	2SD1819-QRS	Transistor
Q3	2SB1073-QR	Transistor
Q4	2SD1819-QRS	Transistor
R1,2	YWR0816P103D	Metal 10K ohms 1/16W
R3	YWR0816P163D	Metal 16K ohms 1/16W
R4	ERJ3GEYJ102	Carbon 1K ohms 1/16W
R5	ERJ3GEYJ330	Carbon 33 ohms 1/16W
R6	YWR0816P153D	Metal 15K ohms 1/16W
R7,8	YWR0816P103D	Metal 10K ohms 1/16W
R9	YWR0816P183D	Metal 18K ohms 1/16W
R10	ERJ3GEY0R00	Carbon 0 ohms 1/16W
R11	YWR0816P163D	Metal 16K ohms 1/16W
R12	ERJ3GEYJ102	Carbon 1K ohms 1/16W
R13-17	ERJ3GEYJ100	Carbon 10 ohms 1/16W
R18	YWR0816P821D	Metal 820 ohms 1/16W
R19,22	ERJ3GEY0R00	Carbon 0 ohms 1/16W
R27	ERJ3GEYJ103	Carbon 10K ohms 1/16W
R28	ERJ3GEYJ221	Carbon 220 ohms 1/16W
R29	ERJ3GEYJ102	Carbon 1K ohms 1/16W
R30	ERJ3GEYJ331	Carbon 330 ohms 1/16W
R31	ERJ3GEYJ471	Carbon 470 ohms 1/16W
R56	ERJ3GEYJ100	Carbon 10 ohms 1/16W
R57	ERJ3GEY0R00	Carbon 0 ohms 1/16W
R58,59	ERJ3GEYJ100	Carbon 10 ohms 1/16W
R61,67	ERJ3GEYJ100	Carbon 10 ohms 1/16W
R69,70	ERJ3GEYJ100	Carbon 10 ohms 1/16W
R73-75	ERJ3GEYJ100	Carbon 10 ohms 1/16W
R80	ERJ3GEYJ100	Carbon 10 ohms 1/16W
R83	ERJ3GEY0R00	Carbon 0 ohms 1/16W
R84	ERJ3GEYJ100	Carbon 10 ohms 1/16W
R91-93	ERJ3GEYJ101	Carbon 100 ohms 1/16W
R98	ERJ3GEYJ680	Carbon 68 ohms 1/16W
R201	YWR0816Q750D	Metal 75 ohms 1/16W

REF.NO.	PART NO.	DESCRIPTION	
R204	YWR0816P681D	Metal	680 ohms 1/16W
R226	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R301	YWR0816Q750D	Metal	75 ohms 1/16W
R304	YWR0816P681D	Metal	680 ohms 1/16W
R326	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R401	YWR0816Q750D	Metal	75 ohms 1/16W
R402	YWR0816P202D	Metal	2K ohms 1/16W
R403	YWR0816P302D	Metal	3K ohms 1/16W
R404	YWR0816P681D	Metal	680 ohms 1/16W
R405	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R406	ERJ3GEYJ105	Carbon	1M ohms 1/16W
R426	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R501	YWR0816Q750D	Metal	75 ohms 1/16W
R504	YWR0816P681D	Metal	680 ohms 1/16W
R526	ERJ3GEY0R00	Carbon	0 ohms 1/16W
C1	YW5F104Z2VB	Ceramic	0.1 μF
C2	ECEV0JV220	Electrolytic	22 μF 6.3V
C3	YW5X103K2VB	Ceramic	0.01 μF
C4	SK21C336KRD0	Electrolytic	33 μF 16V
C5	YW5F104Z2VB	Ceramic	0.1 μF
C6	ECEV0JV220	Electrolytic	22 μF 6.3V
C7	YW5X103K2VB	Ceramic	0.01 μF
C8,9	SK21C336KRD0	Electrolytic	33 μF 16V
C10,11	YW5F104Z2VB	Ceramic	0.1 μF
C12	YW5CH681J2VB	Ceramic	680 pF
C13	YW5CH220J5VB	Ceramic	22 pF
C15	YW5F104Z2VB	Ceramic	0.1 μF
C16	YW5CH100D5VB	Ceramic	10 pF
C17,19	YW5F104Z2VB	Ceramic	0.1 μF
C21-32	YW5F104Z2VB	Ceramic	0.1 μF
C34,35	YW5F104Z2VB	Ceramic	0.1 μF
C36	SK21C336KRD0	Electrolytic	33 μF 16V
C37	YW5F104Z2VB	Ceramic	0.1 μF
C38	SK21C336KRD0	Electrolytic	33 μF 16V
C39-45	YW5F104Z2VB	Ceramic	0.1 μF
C46	SK21C336KRD0	Electrolytic	33 μF 16V
C47-50	YW5F104Z2VB	Ceramic	0.1 μF
C51	SK21C336KRD0	Electrolytic	33 μF 16V
C52	YW5F224Z1VB	Ceramic	0.22 μF
C61-63	YW5CH330J5VB	Ceramic	33 pF
C201	YW5F104Z2VB	Ceramic	0.1 μF
C202	SK21A476KRD0	Electrolytic	47 μF 10V
C203	YWSK1C105KRA	Electrolytic	1 μF 16V
C204,205	YW5F104Z2VB	Ceramic	0.1 μF
C206	SK21C336KRD0	Electrolytic	33 μF 16V
C207	YW5F104Z2VB	Ceramic	0.1 μF
C208	SK21C336KRD0	Electrolytic	33 μF 16V
C301	YW5F104Z2VB	Ceramic	0.1 μF
C302	SK21A476KRD0	Electrolytic	47 μF 10V
C303	YWSK1C105KRA	Electrolytic	1 μF 16V
C304,305	YW5F104Z2VB	Ceramic	0.1 μF
C307,401	YW5F104Z2VB	Ceramic	0.1 μF
C402	SK21A476KRD0	Electrolytic	47 μF 10V
C403	YWSK1C105KRA	Electrolytic	1 μF 16V
C404,405	YW5F104Z2VB	Ceramic	0.1 μF

REF.NO.	PART NO.	DESCRIPTION	
C407	YW5F104Z2VB	Ceramic	0.1 μF
C409	SK31C335KRA	Electrolytic	3.3 μF 16V
C501	YW5F104Z2VB	Ceramic	0.1 μF
C502	SK21A476KRD0	Electrolytic	47 μF 10V
C503	YWSK1C105KRA	Electrolytic	1 μF 16V
C504,505	YW5F104Z2VB	Ceramic	0.1 μF
C506	SK21C336KRD0	Electrolytic	33 μF 16V
C507	YW5F104Z2VB	Ceramic	0.1 μF
C508	SK21C336KRD0	Electrolytic	33 μF 16V
C509	YW5CH330J5VB	Ceramic	33 pF
CT1-3	TZBX4R500BAT	Trimmer Capacitor	
L6,7	YWBLM21B03PB	Coil	
CF201,301	YWHF50ACB32T	Filter	
CF401,501	YWHF50ACB32T	Filter	
CN1,2	YW51756394	Connector	
CN3-5	YW41756386	Connector	
TP1-10	YWRCT2125TPV	Test -Pin	
M15	YWV5KA1337A2	Case for Heat Sink	
M16	YWV2FA0599A4	Cushion A for Heat Sink	
M17	YWV2FA0600A4	Cushion B for Heat Sink	

SYSTEM BOARD

PCB3 (RTL)	YWVKCE550P2A	Printed Circuit Board Assy
IC1	YWL7A0425	LSI
IC2	YWMN18885	LSI
IC3	YWM27C512F52	IC
IC4	43256AGU10L	IC
IC5,6	YWUPD4081BG	IC
IC7	YWUPD4011BG	IC
IC8	YWUPD4081BG	IC
IC9	NJM2904M	IC
IC10	YWM51957BFP	IC
IC12	YWM62352GP	IC
IC13	YWUPC4064G2	IC
IC14	YWUPD4081BG	IC
IC15	YWM51957BFP	IC
IC16	UPD74HC4066G	IC
IC17	YWUPD6450601	IC
IC18	YWRTC450315B	IC
IC19	NJM2902M	IC
Q1,2	2SD1819-QRS	Transistor
Q9	2SB1219-QRS	Transistor
Q10-12	2SD1819-QRS	Transistor
Q13	2SB1218-QRS	Transistor
Q14	2SB1219-QRS	Transistor
Q15	2SD1819-QRS	Transistor
Q16	2SB766A-QR	Transistor
Q17	2SD1819-QRS	Transistor

REF.NO.	PART NO.	DESCRIPTION	
Q18	2SD874A-RS	Transistor	
Q19	2SB1218-QRS	Transistor	
Q20	2SB766A-QR	Transistor	
Q21	2SD1819-QRS	Transistor	
D1,3	MA141K	Diode	
D4-6	MA141K	Diode	
D7	MA143	Diode	
D8-10	MA141K	Diode	
R5,6	ERJ3GEYJ470	Carbon	47 ohms 1/16W
R7,8	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R9,10	ERJ3GEYJ683	Carbon	68K ohms 1/16W
R11,12	ERJ3GEYJ224	Carbon	220K ohms 1/16W
R13	ERJ3GEYJ105	Carbon	1M ohms 1/16W
R14,15	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R16	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R17	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R18	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R19	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R20-46	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R47-63	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R64-66	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R67	YWR0816P103D	Metal	10K ohms 1/16W
R68	YWR0816P303D	Metal	30K ohms 1/16W
R69	YWR0816P103D	Metal	10K ohms 1/16W
R70-85	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R86	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R87	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R88-91	ERJ3GEYJ470	Carbon	47 ohms 1/16W
R92,94	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R95-98	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R99	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R100-121	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R122-129	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R130-134	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R135	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R137	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R138	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R140	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R141	YWR0816P472D	Metal	4.7K ohms 1/16W
R142	YWR0816P123D	Metal	12K ohms 1/16W
R151-154	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R155	YWR0816R433D	Metal	43K ohms 1/16W
R156	YWR0816P272D	Metal	2.7K ohms 1/16W
R157	YWR0816R433D	Metal	43K ohms 1/16W
R158	YWR0816P272D	Metal	2.7K ohms 1/16W
R159	YWR0816R433D	Metal	43K ohms 1/16W
R160	YWR0816P272D	Metal	2.7K ohms 1/16W
R161,162	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R164,165	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R167	YWR0816P163D	Metal	16K ohms 1/16W
R168	YWR0816P202D	Metal	2K ohms 1/16W
R169	YWR0816P123D	Metal	12K ohms 1/16W
R170	ERJ3GEYJ470	Carbon	47 ohms 1/16W
R171	YWR0816P163D	Metal	16K ohms 1/16W
R172	YWR0816P202D	Metal	2K ohms 1/16W
R173	YWR0816P123D	Metal	12K ohms 1/16W
R174	ERJ3GEYJ470	Carbon	47 ohms 1/16W
R175	YWR0816P472D	Metal	4.7K ohms 1/16W
R176,177	YWR0816P332D	Metal	3.3K ohms 1/16W
R178	ERJ3GEYJ470	Carbon	47 ohms 1/16W
R179	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R180	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R181	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R182	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R183	YWR0816P682D	Metal	6.8K ohms 1/16W
R184	YWR0816P123D	Metal	12K ohms 1/16W
R185	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R186	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R187	ERJ3GEYJ224	Carbon	220K ohms 1/16W
R188-191	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R192	ERJ3GEYJ122	Carbon	1.2K ohms 1/16W
R193	ERJ3GEYJ273	Carbon	27K ohms 1/16W
R194	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R195	ERJ3GEYJ912	Carbon	9.1K ohms 1/16W
R196	ERJ3GEYJ183	Carbon	18K ohms 1/16W
R197	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R198	ERJ3GEYJ105	Carbon	1M ohms 1/16W
R199	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R200	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R201	ERJ3GEYJ393	Carbon	39K ohms 1/16W
R202	ERJ3GEYJ513	Carbon	51K ohms 1/16W
R203	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R204,205	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R206	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R208,209	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R211,212	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R213	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R214	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R215	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R216	YWR0816P133D	Metal	13K ohms 1/16W
R217	YWR0816R393D	Metal	39K ohms 1/16W
R218	YWR0816P153D	Metal	15K ohms 1/16W
R219	YWR0816R473D	Metal	47K ohms 1/16W
R220	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R221	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R222	YWR0816P133D	Metal	13K ohms 1/16W
R223	YWR0816R393D	Metal	39K ohms 1/16W
R224	YWR0816P153D	Metal	15K ohms 1/16W
R225	YWR0816R473D	Metal	47K ohms 1/16W
R226	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R227	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R228	YWR0816P133D	Metal	13K ohms 1/16W
R229	YWR0816R393D	Metal	39K ohms 1/16W
R230	YWR0816P153D	Metal	15K ohms 1/16W
R231	YWR0816R473D	Metal	47K ohms 1/16W
C1	YW5F104Z2VB	Ceramic	0.1 μF
C2	SK31C335KRA	Electrolytic	3.3 μF 16V
C3	YW5F104Z2VB	Ceramic	0.1 μF
C4-7	YW5CH151J5VB	Ceramic	150 pF
C8,9	YW5F104Z2VB	Ceramic	0.1 μF

REF.NO.	PART NO.	DESCRIPTION	
C10	SK21C475KRB	Electrolytic	4.7 µF 16V
C11-14	YW5F104Z2VB	Ceramic	0.1 µF
C15	YWSK1C105KRA	Electrolytic	1 µF 16V
C16	YWSK1C106KRC	Electrolytic	10 µF 16V
C17	YWSK1C105KRA	Electrolytic	1 µF 16V
C18	YW5F104Z2VB	Ceramic	0.1 µF
C19	YW5CH151J5VB	Ceramic	150 pF
C22	YWSK1C106KRC	Electrolytic	10 µF 16V
C24-29	YW5F104Z2VB	Ceramic	0.1 µF
C30	YWSK1V104KRA	Electrolytic	0.1 µF 35V
C31-33	YW5F104Z2VB	Ceramic	0.1 µF
C36	YWSK1V105KRB	Electrolytic	1 µF 35V
C37	SK21C475KRB	Electrolytic	4.7 µF 16V
C39,41	YW5F104Z2VB	Ceramic	0.1 µF
C43-46	YW5F104Z2VB	Ceramic	0.1 µF
C47	SK21C336KRD0	Electrolytic	33 µF 16V
C48	YW5X102K5VB	Ceramic	1000 pF
C49	YW5F104Z2VB	Ceramic	0.1 µF
C50	YW5X223K2VB	Ceramic	0.022 µF
C51,52	YW5F104Z2VB	Ceramic	0.1 µF
C53	YW5UJ180J5VB	Ceramic	18 pF
C54	YW5UJ120J5VB	Ceramic	12 pF 50V
C55	SK20J106KRB	Electrolytic	10 µF 6.3V
C56	SK21C225KRA	Electrolytic	2.2 µF 16V
C57	YW5CH040D5VB	Ceramic	4 pF
C59	SK20J336KRC	Electrolytic	33 µF 6.3V
C60	YW5F104Z2VB	Ceramic	0.1 µF
C61,62	YW5X103K2VB	Ceramic	0.01 µF
C63	SK20J686KRD0	Electrolytic	68 µF 6.3V
C64	SK1V685KRD0	Electrolytic	6.8 µF 35V
C65	ECEV0JV220	Electrolytic	22 µF 6.3V
C66	SK21C336KRD0	Electrolytic	33 µF 16V
C67	ECEV0JV220	Electrolytic	22 µF 6.3V
C68,69	SK21C336KRD0	Electrolytic	33 µF 16V
C70	ECEV0JV220	Electrolytic	22 µF 6.3V
CT1	ECRJA010A12	Trimmer Capacitor	
L1	ELJFA470KF	Coil	47 µH
L2,3	YWNL321R0J	Coil	320 µH
SW1	YWSKQDPA	Push Switch	
X1	YWCSTCS8MT	Oscillator	
CN1-3	YW51756394	24-pin Connector	
CN4-6	YW71756436	16-pin Connector	
BAT1	BR30321F2	Battery	
TP1-6	YWRCT2125TPV	Test- Pin	

PREAMP / ENCODER BOARD

REF.NO.	PART NO.	DESCRIPTION
PCB4 (RTL)	YWVKBE550E3A	Printed Circuit Board Assy
IC1	NJM2904M	IC
IC2	UPD74HC4049G	IC
IC3	YWM51272FP	IC
IC4	YWUPD4050BG	IC
IC5	YWUPD4053BG	IC
IC6	YWCXA1229M	IC
IC8-10	YWUPD4052BG	IC
IC11	YWTC4W53FL	IC
IC401	YWUPC4062G2	IC
Q1	2SB766-RS	Transistor
Q3	2SD1819-QRS	Transistor
Q4	2SB1218-QRS	Transistor
Q5	2SD1819-QRS	Transistor
Q6	2SB1218-QRS	Transistor
Q7	2SD1819-QRS	Transistor
Q8	2SA1532-CD	Transistor
Q9,11	2SC3931-CD	Transistor
Q12-18	2SC3931-CD	Transistor
Q19	XP4601	Transistor
Q20	2SD1820-QRS	Transistor
Q21	2SB1219-QRS	Transistor
Q22-25	2SD1819-QRS	Transistor
Q26-28	2SC3931-CD	Transistor
Q29	2SA1532-CD	Transistor
Q30,32	2SC3931-CD	Transistor
Q33-35	2SC3931-CD	Transistor
Q36	2SD1819-QRS	Transistor
Q42,44	2SC3931-CD	Transistor
Q46-49	2SC3931-CD	Transistor
Q50	XP4601	Transistor
Q51	2SD1820-QRS	Transistor
Q52	2SB1219-QRS	Transistor
Q53-55	2SC3931-CD	Transistor
Q56	XP4601	Transistor
Q57	2SD1820-QRS	Transistor
Q58	2SB1219-QRS	Transistor
Q59-61	2SC3931-CD	Transistor
Q62	XP4601	Transistor
Q63	2SD1820-QRS	Transistor
Q64	2SB1219-QRS	Transistor
Q65-67	2SC3931-CD	Transistor
Q68	XP4601	Transistor
Q69	2SD1820-QRS	Transistor
Q70	2SB1219-QRS	Transistor
Q71-73	2SC3931-CD	Transistor
Q74	XP4601	Transistor
Q75	2SD1820-QRS	Transistor
Q76	2SB1219-QRS	Transistor
Q77	2SC3931-CD	Transistor
Q78-81	2SA1532-CD	Transistor

REF.NO.	PART NO.	DESCRIPTION
Q82	2SC3931-CD	Transistor
Q83,84	2SA1532-CD	Transistor
Q85-87	2SC3931-CD	Transistor
Q401	2SA1532-CD	Transistor
Q402	2SB766A-QR	Transistor
Q403	2SD1819-QRS	Transistor
Q404	2SD874A-RS	Transistor
Q405	2SB1218-QRS	Transistor
Q501	2SA1532-CD	Transistor
Q502	3SK157	FET
Q503	2SC3931-CD	Transistor
Q504	2SA1532-CD	Transistor
Q505	3SK157	FET
Q506	2SC3931-CD	Transistor
Q507,508	2SD1819-QRS	Transistor
Q509,510	2SC3931-CD	Transistor
Q511-513	2SA1532-CD	Transistor
Q514	2SC3931-CD	Transistor
Q515	2SA1532-CD	Transistor
Q516,517	2SC3931-CD	Transistor
Q518	2SA1532-CD	Transistor
Q519	3SK157	FET
Q520	2SC3931-CD	Transistor
Q601	2SA1532-CD	Transistor
Q602	3SK157	FET
Q603	2SC3931-CD	Transistor
Q604	2SA1532-CD	Transistor
Q605	3SK157	FET
Q606	2SC3931-CD	Transistor
Q607,608	2SD1819-QRS	Transistor
Q609,610	2SC3931-CD	Transistor
Q611-613	2SA1532-CD	Transistor
Q614	2SC3931-CD	Transistor
Q615	2SA1532-CD	Transistor
Q616,617	2SC3931-CD	Transistor
Q618	2SA1532-CD	Transistor
Q619	3SK157	FET
Q620	2SC3931-CD	Transistor
Q701	2SA1532-CD	Transistor
Q702	3SK157	FET
Q703	2SC3931-CD	Transistor
Q704	2SA1532-CD	Transistor
Q705	3SK157	FET
Q706	2SC3931-CD	Transistor
Q707,708	2SD1819-QRS	Transistor
Q709,710	2SC3931-CD	Transistor
Q711-713	2SA1532-CD	Transistor
Q714	2SC3931-CD	Transistor
Q715	2SA1532-CD	Transistor
Q716,717	2SC3931-CD	Transistor
Q718	2SA1532-CD	Transistor
Q719	3SK157	FET
Q720	2SC3931-CD	Transistor
D1,3	MA143	Diode
D5,8	MA143	Diode

REF.NO.	PART NO.	DESCRIPTION	
D9	MA143	Diode	
R1,2	YWR0816R473D	Metal	47K ohms 1/16W
R3	YWR0816P472D	Metal	4.7K ohms 1/16W
R4	YWR0816P512D	Metal	5.1K ohms 1/16W
R5	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R6	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R7	YWR0816R393D	Metal	39K ohms 1/16W
R8	YWR0816P303D	Metal	30K ohms 1/16W
R9	YWR0816P101D	Metal	100 ohms 1/16W
R11	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R13	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R14	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R15	ERJ3GEYJ392	Carbon	3.9K ohms 1/16W
R16	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R17	ERJ3GEYJ272	Carbon	2.7K ohms 1/16W
R18	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R19	ERJ3GEYJ562	Carbon	5.6K ohms 1/16W
R20	ERJ3GEYJ182	Carbon	1.8K ohms 1/16W
R21	ERJ3GEYJ221	Carbon	220 ohms 1/16W
R22	ERJ3GEYJ392	Carbon	3.9K ohms 1/16W
R23	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R24	ERJ3GEYJ272	Carbon	2.7K ohms 1/16W
R25	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R26	ERJ3GEYJ562	Carbon	5.6K ohms 1/16W
R27	ERJ3GEYJ182	Carbon	1.8K ohms 1/16W
R28-30	ERJ3GEYJ221	Carbon	220 ohms 1/16W
R31	ERJ3GEYJ392	Carbon	3.9K ohms 1/16W
R32	ERJ3GEYJ152	Carbon	1.5K ohms 1/16W
R33	ERJ3GEYJ822	Carbon	8.2K ohms 1/16W
R34	ERJ3GEYJ682	Carbon	6.8K ohms 1/16W
R35	ERJ3GEYJ432	Carbon	4.3K ohms 1/16W
R36	ERJ3GEYJ242	Carbon	2.4K ohms 1/16W
R39,40	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R41	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R42	ERJ3GEYJ622	Carbon	6.2K ohms 1/16W
R43	ERJ3GEYJ272	Carbon	2.7K ohms 1/16W
R44	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R45	ERJ3GEYJ100	Carbon	10 ohms 1/16W
R46,47	ERJ3GEYJ272	Carbon	2.7K ohms 1/16W
R48	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R49	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R50,51	ERJ3GEYJ362	Carbon	3.6K ohms 1/16W
R52	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R54	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R55	YWR0816P202D	Metal	2K ohms 1/16W
R56	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R57	YWR0816P222D	Metal	2.2K ohms 1/16W
R58-61	ERJ3GEYJ100	Carbon	10 ohms 1/16W
R62,63	ERJ3GEYJ221	Carbon	220 ohms 1/16W
R64	ERJ3GEYJ392	Carbon	3.9K ohms 1/16W
R65-67	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R68	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R69,70	ERJ3GEYJ221	Carbon	220 ohms 1/16W
R71	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R72-74	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W

REF.NO.	PART NO.	DESCRIPTION	
R75	ERJ3GEYJ152	Carbon	1.5K ohms 1/16W
R76	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R77-79	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R80,81	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R82,84	YWR0816P103D	Metal	10K ohms 1/16W
R86,87	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R88	ERJ3GEYJ563	Carbon	56K ohms 1/16W
R89	ERJ3GEYJ272	Carbon	2.7K ohms 1/16W
R90	ERJ3GEYJ471	Carbon	470 ohms 1/16W
R91	ERJ3GEYJ272	Carbon	2.7K ohms 1/16W
R92	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R93	ERJ3GEYJ272	Carbon	2.7K ohms 1/16W
R94	ERJ3GEYJ561	Carbon	560 ohms 1/16W
R95,96	ERJ3GEYJ272	Carbon	2.7K ohms 1/16W
R97,98	ERJ3GEYJ221	Carbon	220 ohms 1/16W
R99	ERJ3GEYJ392	Carbon	3.9K ohms 1/16W
R100	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R101	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R102	ERJ3GEYJ682	Carbon	6.8K ohms 1/16W
R103	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R104	ERJ3GEYJ242	Carbon	2.4K ohms 1/16W
R105	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R107	ERJ3GEYJ152	Carbon	1.5K ohms 1/16W
R108	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R109	ERJ3GEYJ152	Carbon	1.5K ohms 1/16W
R110	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R112	ERJ3GEYJ152	Carbon	1.5K ohms 1/16W
R113	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R114	ERJ3GEYJ152	Carbon	1.5K ohms 1/16W
R115	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R117-119	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R120	ERJ3GEYJ182	Carbon	1.8K ohms 1/16W
R121,122	ERJ3GEYJ221	Carbon	220 ohms 1/16W
R123	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R127	ERJ3GEYJ333	Carbon	33K ohms 1/16W
R170	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R172	YWR0816P273D	Metal	27K ohms 1/16W
R173	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R174	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R176	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R177	YWR0816P202D	Metal	2K ohms 1/16W
R178	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R179	YWR0816P222D	Metal	2.2K ohms 1/16W
R180-183	ERJ3GEYJ100	Carbon	10 ohms 1/16W
R185	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R187	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R188	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R189	YWR0816P202D	Metal	2K ohms 1/16W
R190	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R191	YWR0816P222D	Metal	2.2K ohms 1/16W
R192-195	ERJ3GEYJ100	Carbon	10 ohms 1/16W
R197	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R198	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R200	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R201	YWR0816P202D	Metal	2K ohms 1/16W

REF.NO.	PART NO.	DESCRIPTION	
R202	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R203	YWR0816P222D	Metal	2.2K ohms 1/16W
R204-207	ERJ3GEYJ100	Carbon	10 ohms 1/16W
R209	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R210	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R212	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R213	YWR0816P202D	Metal	2K ohms 1/16W
R214	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R215	YWR0816P222D	Metal	2.2K ohms 1/16W
R216-219	ERJ3GEYJ100	Carbon	10 ohms 1/16W
R221	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R222	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R224	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R225	YWR0816P202D	Metal	2K ohms 1/16W
R226	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R227	YWR0816P222D	Metal	2.2K ohms 1/16W
R228-231	ERJ3GEYJ100	Carbon	10 ohms 1/16W
R232	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R233	ERJ3GEYJ152	Carbon	1.5K ohms 1/16W
R234,235	ERJ3GEYJ682	Carbon	6.8K ohms 1/16W
R236	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R237	ERJ3GEYJ682	Carbon	6.8K ohms 1/16W
R238,239	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R240	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R241	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R242	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R243	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R244	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R245	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R246	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R247	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R248	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R249	ERJ3GEYJ221	Carbon	220 ohms 1/16W
R250	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R251	ERJ3GEYJ221	Carbon	220 ohms 1/16W
R252	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R253,254	YWR0816P102D	Metal	1K ohms 1/16W
R255	ERJ3GEYJ682	Carbon	6.8K ohms 1/16W
R256	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R257	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R258	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R259	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R260	YWR0816P223D	Metal	22K ohms 1/16W
R261	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R262,263	ERJ3GEYJ682	Carbon	6.8K ohms 1/16W
R264	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R265	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R266	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R267	YWR0816P223D	Metal	22K ohms 1/16W
R268	ERJ3GEYJ682	Carbon	6.8K ohms 1/16W
R269,270	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R271	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R272	ERJ3GEYJ122	Carbon	1.2K ohms 1/16W
R275	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R275	ERJ3GEY0R00	Carbon	0 ohms 1/16W

REF.NO.	PART NO.	DESCRIPTION	
R401	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R402	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R403	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R404	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R405	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R406	YWR0816P912D	Metal	9.1K ohms 1/16W
R407	YWR0816P123D	Metal	12K ohms 1/16W
R408	YWR0816P103D	Metal	10K ohms 1/16W
R409	YWR0816P103D	Metal	10K ohms 1/16W
R410	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R411	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R412	YWR0816P912D	Metal	9.1K ohms 1/16W
R413	YWR0816P123D	Metal	12K ohms 1/16W
R414	YWR0816P103D	Metal	10K ohms 1/16W
R415	YWR0816P103D	Metal	10K ohms 1/16W
R501	ERJ3GEYJ241	Carbon	240 ohms 1/16W
R502	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R503	ERJ3GEYJ242	Carbon	2.4K ohms 1/16W
R504	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R505,506	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R507	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R508	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R509	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R510	ERJ3GEYJ303	Carbon	30K ohms 1/16W
R511	ERJ3GEYJ220	Carbon	22 ohms 1/16W
R512	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R513	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R514	ERJ3GEYJ330	Carbon	33 ohms 1/16W
R515	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R516	ERJ3GEYJ151	Carbon	150 ohms 1/16W
R517	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R518	ERJ3GEYJ155	Carbon	1.5M ohms 1/16W
R519	ERJ3GEYJ302	Carbon	3K ohms 1/16W
R520	ERJ3GEYJ221	Carbon	220 ohms 1/16W
R521	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R522	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W
R523	ERJ3GEYJ561	Carbon	560 ohms 1/16W
R524	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R525	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R526	ERJ3GEYJ562	Carbon	5.6K ohms 1/16W
R527	ERJ3GEYJ751	Carbon	750 ohms 1/16W
R528	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W
R529	ERJ3GEYJ562	Carbon	5.6K ohms 1/16W
R530	ERJ3GEYJ152	Carbon	1.5K ohms 1/16W
R531,532	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R533	ERJ3GEYJ822	Carbon	8.2K ohms 1/16W
R534	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R535,536	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R537	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R538	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R539	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R540	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R541	ERJ3GEYJ330	Carbon	33 ohms 1/16W
R542	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R601	ERJ3GEYJ241	Carbon	240 ohms 1/16W
R602	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R603	ERJ3GEYJ242	Carbon	2.4K ohms 1/16W
R604	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R605,606	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R607	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R608	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R609	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R610	ERJ3GEYJ303	Carbon	30K ohms 1/16W
R611	ERJ3GEYJ220	Carbon	22 ohms 1/16W
R612	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R613	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R614	ERJ3GEYJ330	Carbon	33 ohms 1/16W
R615	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R616	ERJ3GEYJ221	Carbon	220 ohms 1/16W
R617	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R618	ERJ3GEYJ155	Carbon	1M ohms 1/16W
R619	ERJ3GEYJ302	Carbon	3K ohms 1/16W
R620	ERJ3GEYJ271	Carbon	270 ohms 1/16W
R621	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R622	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W
R623	ERJ3GEYJ561	Carbon	560 ohms 1/16W
R624	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R625	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R626	ERJ3GEYJ562	Carbon	5.6K ohms 1/16W
R627	ERJ3GEYJ751	Carbon	750 ohms 1/16W
R628	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W
R629	ERJ3GEYJ562	Carbon	5.6K ohms 1/16W
R630	ERJ3GEYJ152	Carbon	1.5K ohms 1/16W
R631,632	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R633	ERJ3GEYJ822	Carbon	8.2K ohms 1/16W
R634	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R635,636	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R637	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R638	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R639	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R640	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R641	ERJ3GEYJ330	Carbon	33 ohms 1/16W
R642	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R701	ERJ3GEYJ241	Carbon	240 ohms 1/16W
R702	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R703	ERJ3GEYJ242	Carbon	2.4K ohms 1/16W
R704	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R705,706	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R707	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R708	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R709	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R710	ERJ3GEYJ303	Carbon	30K ohms 1/16W
R711	ERJ3GEYJ220	Carbon	22 ohms 1/16W
R712	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R713	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R714	ERJ3GEYJ330	Carbon	33 ohms 1/16W
R715	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R716	ERJ3GEYJ151	Carbon	150 ohms 1/16W
R717	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R718	ERJ3GEYJ155	Carbon	1M ohms 1/16W

REF.NO.	PART NO.	DESCRIPTION	
R719	ERJ3GEYJ302	Carbon	3K ohms 1/16W
R720	ERJ3GEYJ221	Carbon	220 ohms 1/16W
R721	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R722	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W
R723	ERJ3GEYJ561	Carbon	560 ohms 1/16W
R724	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R725	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R726	ERJ3GEYJ562	Carbon	5.6K ohms 1/16W
R727	ERJ3GEYJ751	Carbon	750 ohms 1/16W
R728	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W
R729	ERJ3GEYJ562	Carbon	5.6K ohms 1/16W
R730	ERJ3GEYJ152	Carbon	1.5K ohms 1/16W
R731,732	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R733	ERJ3GEYJ822	Carbon	8.2K ohms 1/16W
R734	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R735,736	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R737	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R738	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R739	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R740	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R741	ERJ3GEYJ330	Carbon	33 ohms 1/16W
R742	ERJ3GEYJ153	Carbon	15K ohms 1/16W
VR1-4	EVM7JGA30B23	Variable Resistor	2K ohms
VR5	EVM7JGA30B13	Variable Resistor	1K ohms
VR6	YWRH03AVAS3W	Variable Resistor	4.7K ohms
VR7,8	YWRH03AVA15W	Variable Resistor	100K ohms
VR9	EVM7JGA30B23	Variable Resistor	2K ohms
VR10,12	EVM7JGA30B13	Variable Resistor	1K ohms
VR13,14	EVM7JGA30B13	Variable Resistor	1K ohms
VR9	EVM7JGA30B53	Variable Resistor	5K ohms
VR21-23	EVM7JGA30B23	Variable Resistor	2K ohms
VR24,25	EVM7JGA30B14	Variable Resistor	10K ohms
VR501,601	YWST3A101	Variable Resistor	100 ohms
VR701	YWST3A101	Variable Resistor	100 ohms
C1	ECEV0JV330	Electrolytic	33 µF 6.3V
C2	ECEV1CV470	Electrolytic	47 µF 16V
C3	YWSK1C106KRC	Electrolytic	10 µF 16V
C4	ECEV0JV330	Electrolytic	33 µF 6.3V
C5	ECEV0JV470S	Electrolytic	47 µF 6.3V
C6	YWSK1C106KRC	Electrolytic	10 µF 16V
C7	YWSK0G106KRB	Electrolytic	10 µF 4V
C8	YW5F104Z2VB	Ceramic	0.1 µF
C9	ECEV1CV100	Electrolytic	10 µF 16V
C10	YW5CH680J5VB	Ceramic	68 pF
C11	YW5CH270J5VB	Ceramic	27 pF
C12	YW5CH680J5VB	Ceramic	68 pF
C13	YW5CH270J5VB	Ceramic	27 pF
C14,15	ECEV1CV100	Electrolytic	10 µF 16V
C16,17	YW5CH470J5VB	Ceramic	47 pF
C18	YW5CH150J5VB	Ceramic	15 pF
C19	YW5CH100J5VB	Ceramic	10 pF
C20	ECEV1CV100	Electrolytic	10 µF 16V
C22,23	YW5CH050D5VB	Ceramic	5 pF
C24	YW5F104Z2VB	Ceramic	0.1 µF
C25	ECEV0JV330	Electrolytic	33 µF 6.3V
C27	YW5CH030D5VB	Ceramic	3 pF

REF.NO.	PART NO.	DESCRIPTION	
C28-30	ECEV1CV100	Electrolytic	10 µF 16V
C31,32	YW5CH470J5VB	Ceramic	47 pF
C33	YW5CH150J5VB	Ceramic	15 pF
C34	YW5CH620J5VB	Ceramic	62 pF
C35	YW5CH221J5VB	Ceramic	220 pF
C36,37	YW5CH470J5VB	Ceramic	47 pF
C38	YW5CH150J5VB	Ceramic	15 pF
C39	YW5CH620J5VB	Ceramic	62 pF
C40	YW5CH221J5VB	Ceramic	220 pF
C41,42	ECEV1CV100	Electrolytic	10 µF 16V
C43,44	YW5X103K2VB	Ceramic	0.01 µF
C45,46	ECEV1HV010	Electrolytic	1 µF 50V
C47,48	ECEV1CV100	Electrolytic	10 µF 16V
C49-51	YW5F104Z2VB	Ceramic	0.1 µF
C52,53	ECEV1CV470	Electrolytic	47 µF 16V
C54	YW5F104Z2VB	Ceramic	0.1 µF
C55	ECEV1HV010	Electrolytic	1 µF 50V
C56	ECEV0JV330	Electrolytic	33 µF 6.3V
C57	ECEV1CV100	Electrolytic	10 µF 16V
C58,59	YW5CH470J5VB	Ceramic	47 pF
C60	YW5CH150J5VB	Ceramic	15 pF
C61	YW5CH080D5VB	Ceramic	8 pF
C62	ECEV1CN100	Electrolytic	10 µF 16V
C64	YW5F104Z2VB	Ceramic	0.1 µF
C65	ECEV1CV100	Electrolytic	10 µF 16V
C66	YW5F104Z2VB	Ceramic	0.1 µF
C67	ECEV1CV100	Electrolytic	10 µF 16V
C68	YW5F104Z2VB	Ceramic	0.1 µF
C69	YW5CH151J5VB	Ceramic	150 pF
C70	YW5CH390J5VB	Ceramic	39 pF
C71	ECEV1CV100	Electrolytic	10 µF 16V
C88-90	ECEV1HV010	Electrolytic	1 µF 50V
C91,92	ECEV1CV470	Electrolytic	47 µF 16V
C93	ECEV1CV100	Electrolytic	10 µF 16V
C94	YW5F104Z2VB	Ceramic	0.1 µF
C95	ECEV1CV100	Electrolytic	10 µF 16V
C96	ECEV0JV330	Electrolytic	33 µF 6.3V
C97	YW5F104Z2VB	Ceramic	0.1 µF
C98,99	ECEV0JV330	Electrolytic	33 µF 6.3V
C100	YW5F104Z2VB	Ceramic	0.1 µF
C101	ECEV0JV330	Electrolytic	33 µF 6.3V
C102	YW5F104Z2VB	Ceramic	0.1 µF
C103	ECEV0JV330	Electrolytic	33 µF 6.3V
C104	YW5F104Z2VB	Ceramic	0.1 µF
C105,106	ECEV1CV100	Electrolytic	10 µF 16V
C107,109	YW5CH020D5VB	Ceramic	2 pF
C111,113	YW5CH020D5VB	Ceramic	2 pF
C115	YW5CH020D5VB	Ceramic	2 pF
C116,118	ECEV1CV100	Electrolytic	10 µF 16V
C119,120	ECEV1CV100	Electrolytic	10 µF 16V
C121	YW5CH470J5VB	Ceramic	47 pF
C122	ECEV1CV100	Electrolytic	10 µF 16V
C123-125	YW5F104Z2VB	Ceramic	0.1 µF
C126,127	ECEV1AG101	Electrolytic	100 µF 10V
C128,129	ECEV1CV470	Electrolytic	47 µF 16V

REF.NO.	PART NO.	DESCRIPTION
C401	ECEV1CV100	Electrolytic 10 µF 16V
C402	SK21D226KRD0	Electrolytic 22 µF
C403	ECEV1CV100	Electrolytic 10 µF 16V
C404	SK21C336KRD0	Electrolytic 33 µF
C405	ECEV1CV100	Electrolytic 10 µF 16V
C406,407	ECEV1AG101	Electrolytic 100 µF 10V
C501	YW5CH180J5VB	Ceramic 18 pF
C502	YW5CH150J5VB	Ceramic 15 pF
C503	YW5CH180J5VB	Ceramic 18 pF
C504	YW5F104Z2VB	Ceramic 0.1 µF
C505	ECEV1CV100	Electrolytic 10 µF 16V
C506	YWSK1E155MRB	Electrolytic 1.5 µF 25V
C507	YW5CH390J5VB	Ceramic 39 pF
C508	ECEV1CV100	Electrolytic 10 µF 16V
C509	YW5F104Z2VB	Ceramic 0.1 µF
C510	YW5CH220J5VB	Ceramic 22 pF
C511	ECEV1CV470	Electrolytic 47 µF 16V
C512	YW5CH100J5VB	Ceramic 10 pF
C514	ECEV1CV100	Electrolytic 10 µF 16V
C515,516	YW5F104Z2VB	Ceramic 0.1 µF
C518	YW5CH220J5VB	Ceramic 22 pF
C601	YW5CH180J5VB	Ceramic 18 pF
C602	YW5CH150J5VB	Ceramic 15 pF
C603	YW5CH180J5VB	Ceramic 18 pF
C604	YW5F104Z2VB	Ceramic 0.1 µF
C605	ECEV1CV100	Electrolytic 10 µF 16V
C606	YWSK1E155MRB	Electrolytic 1.5 µF 25V
C607	YW5CH390J5VB	Ceramic 39 pF
C608	ECEV1CV100	Electrolytic 10 µF 16V
C609	YW5F104Z2VB	Ceramic 0.1 µF
C610	YW5CH220J5VB	Ceramic 22 pF
C611	ECEV1CV470	Electrolytic 47 µF 16V
C612	YW5CH100J5VB	Ceramic 10 pF
C614	ECEV1CV100	Electrolytic 10 µF 16V
C615,616	YW5F104Z2VB	Ceramic 0.1 µF
C618	YW5CH220J5VB	Ceramic 22 pF
C701	YW5CH180J5VB	Ceramic 18 pF
C702	YW5CH150J5VB	Ceramic 15 pF
C703	YW5CH180J5VB	Ceramic 18 pF
C704	YW5F104Z2VB	Ceramic 0.1 µF
C705	ECEV1CV100	Electrolytic 10 µF 16V
C706	YWSK1E155MRB	Electrolytic 0.1 µF
C707	YW5CH390J5VB	Ceramic 39 pF
C708	ECEV1CV100	Electrolytic 10 µF 16V
C709	YW5F104Z2VB	Ceramic 0.1 µF
C710	YW5CH220J5VB	Ceramic 22 pF
C711	ECEV1CV470	Electrolytic 47 µF 16V
C712	YW5CH100J5VB	Ceramic 10 pF
C714	ECEV1CV100	Electrolytic 10 µF 16V
C715,716	YW5F104Z2VB	Ceramic 0.1 µF
C718	YW5CH220J5VB	Ceramic 22 pF
CT1,501	TZBX4R500BAT	Trimmer Capacitor
CT601,701	TZBX4R500BAT	Trimmer Capacitor
DL5	ELB4A514	Delay Line
L1-4	YWNL325R6J	Coil

REF.NO.	PART NO.	DESCRIPTION
L501,601	YWNL322R7J	Coil
L701	YWNL322R7J	Coil
CF1	ELB4A518	Filter
CF501	YWCY4S567	Filter
CF502	YWCY4T566	Filter
CF601	YWCY4S567	Filter
CF602	YWCY4T566	Filter
CF701	YWCY4S567	Filter
CF702	YWCY4T566	Filter
CN1-3	YW51756394	24-pin Connector
CN6-8	YW21763142	22-pin Connector
CN10	YW522050890	8-pin Connector
CN11	YW41756392	12-pin Connector
CN12	YW51756394	24-pin Connector
TP1-12	YWRCT2125TPV	Test-pin
TP401,501	YWRCT2125TPV	Test-pin
TP502,601	YWRCT2125TPV	Test-pin
TP602,701	YWRCT2125TPV	Test-pin
TP702	YWRCT2125TPV	Test-pin

SYNC BOARD

REF.NO.	PART NO.	DESCRIPTION
PCB5 (RTL)	YWVKCE550E3A	Printed Circuit Board Assy
IC1	YWTC7S04F	IC
IC3	MN73093	IC
IC4	YWTC7SU04FL	IC
IC5	NJM2904M	IC
IC6	YWTC4S66FR	IC
IC7	YWUPC4062G2	IC
IC8	YWUPD74HC04G	IC
IC11	YWLM1881M	IC
IC12	NJM2904M	IC
IC13	YWTC4S11F	IC
IC14	YWUPD74HC32G	IC
IC15	YWTC7W08F	IC
IC23	YWTC7S04F	IC
IC24	YWTC7S08F	IC
IC25,26	UPD74HC164G	IC
IC27	YWTC7W04FL	IC
IC28-30	UPD74HC164G	IC
IC31	YWTC7S04F	IC
Q2	2SB1218-QRS	Transistor
Q3-6	2SK662-PQR	FET
Q7	2SD1819-QRS	Transistor
Q8	2SB1218-QRS	Transistor
Q9	2SB766-RS	Transistor
Q10	2SC3931-CD	Transistor
Q13	2SB1218-QRS	Transistor
Q15,16	2SC3931-CD	Transistor
Q17	2SB1218-QRS	Transistor
D1-6	MA372	Diode
D8	MA141K	Diode
R1	ERJ3GEYJ103	Carbon 10K ohms 1/16W

REF.NO.	PART NO.	DESCRIPTION
R2,3	ERJ3GEYJ223	Carbon 22K ohms 1/16W
R4	ERJ3GEYJ103	Carbon 10K ohms 1/16W
R5,6	ERJ3GEYJ223	Carbon 22K ohms 1/16W
R7,8	ERJ3GEY0R00	Carbon 0 ohms 1/16W
R11	YWR0816P822D	Metal 8.2K ohms 1/16W
R12	YWR0816P332D	Metal 3.3K ohms 1/16W
R13	YWR0816P752D	Metal 7.5K ohms 1/16W
R15	YWR0816P751D	Metal 750 ohms 1/16W
R16	ERJ3GEYJ332	Carbon 3.3K ohms 1/16W
R17	ERJ3GEYJ102	Carbon 1K ohms 1/16W
R18	ERJ3GEYJ473	Carbon 47K ohms 1/16W
R19,20	ERJ3GEYJ103	Carbon 10K ohms 1/16W
R21	ERJ3GEYJ105	Carbon 1M ohms 1/16W
R22	ERJ3GEYJ152	Carbon 1.5K ohms 1/16W
R23-25	ERJ3GEYJ101	Carbon 100 ohms 1/16W
R28	ERJ3GEYJ101	Carbon 100 ohms 1/16W
R29,30	ERJ3GEYJ333	Carbon 33K ohms 1/16W
R31	ERJ3GEYJ184	Carbon 180K ohms 1/16W
R32	YWR0816P103D	Metal 10K ohms 1/16W
R33,34	ERJ3GEYJ101	Carbon 100 ohms 1/16W
R35	ERJ3GEYJ332	Carbon 3.3K ohms 1/16W
R36	ERJ3GEYJ511	Carbon 510 ohms 1/16W
R37	ERJ3GEYJ334	Carbon 330K ohms 1/16W
R38	ERJ3GEYJ332	Carbon 3.3K ohms 1/16W
R39	ERJ3GEYJ104	Carbon 100K ohms 1/16W
R40	ERJ3GEYJ823	Carbon 82K ohms 1/16W
R41	ERJ3GEYJ332	Carbon 3.3K ohms 1/16W
R42	ERJ3GEYJ473	Carbon 47K ohms 1/16W
R43	ERJ3GEYJ472	Carbon 4.7K ohms 1/16W
R45	ERJ3GEY0R00	Carbon 0 ohms 1/16W
R47	ERJ3GEYJ105	Carbon 1M ohms 1/16W
R48,49	ERJ3GEYJ103	Carbon 10K ohms 1/16W
R50	ERJ3GEYJ102	Carbon 1K ohms 1/16W
R51	ERJ3GEYJ103	Carbon 10K ohms 1/16W
R52	ERJ3GEYJ105	Carbon 1M ohms 1/16W
R53	ERJ3GEYJ221	Carbon 220 ohms 1/16W
R54	ERJ3GEYJ103	Carbon 10K ohms 1/16W
R56-58	ERJ3GEYJ102	Carbon 1K ohms 1/16W
R59	YWR0816R473D	Metal 47K ohms 1/16W
R60-62	YWR0816R104D	Metal 100K ohms 1/16W
R63	YWR0816P222D	Metal 2.2K ohms 1/16W
R64	YWR0816P223D	Metal 22K ohms 1/16W
R65	YWR0816P103D	Metal 10K ohms 1/16W
R66	ERJ3GEYJ101	Carbon 100 ohms 1/16W
R67	ERJ3GEYJ103	Carbon 10K ohms 1/16W
R68	ERJ3GEYJ684	Carbon 680K ohms 1/16W
R69	ERJ3GEYJ562	Carbon 5.6K ohms 1/16W
R70	ERJ3GEYJ101	Carbon 100 ohms 1/16W
R71	ERJ3GEYJ182	Carbon 1.8K ohms 1/16W
R72	ERJ3GEYJ752	Carbon 7.5K ohms 1/16W
R73	ERJ3GEYJ303	Carbon 30K ohms 1/16W
R74	ERJ3GEY0R00	Carbon 0 ohms 1/16W
R75	ERJ3GEYJ222	Carbon 2.2K ohms 1/16W
R77	ERJ3GEYJ104	Carbon 100K ohms 1/16W
R78,79	ERJ3GEYJ103	Carbon 10K ohms 1/16W

REF.NO.	PART NO.	DESCRIPTION
R81-83	YWR0816R473D	Metal 47K ohms 1/16W
R84	YWR0816R513D	Metal 51K ohms 1/16W
R85	ERJ3GEYJ101	Carbon 100 ohms 1/16W
R86	ERJ3GEYJ102	Carbon 1K ohms 1/16W
R89	ERJ3GEY0R00	Carbon 0 ohms 1/16W
R91	ERJ3GEYJ101	Carbon 100 ohms 1/16W
R92	ERJ3GEYJ223	Carbon 22K ohms 1/16W
R94	ERJ3GEYJ102	Carbon 1K ohms 1/16W
R95	ERJ3GEYJ223	Carbon 22K ohms 1/16W
R96	ERJ3GEYJ272	Carbon 2.7K ohms 1/16W
R100	ERJ3GEYJ561	Carbon 560 ohms 1/16W
R101	ERJ3GEYJ102	Carbon 1K ohms 1/16W
R104	ERJ3GEYJ560	Carbon 56 ohms 1/16W
R105	ERJ3GEYJ912	Carbon 9.1K ohms 1/16W
R106	ERJ3GEYJ512	Carbon 5.1K ohms 1/16W
R107	ERJ3GEYJ182	Carbon 1.8K ohms 1/16W
R108	ERJ3GEYJ102	Carbon 1K ohms 1/16W
R109	ERJ3GEYJ820	Carbon 82 ohms 1/16W
R110	ERJ3GEYJ103	Carbon 10K ohms 1/16W
R111,112	ERJ3GEYJ102	Carbon 1K ohms 1/16W
R118	ERJ3GEYJ102	Carbon 1K ohms 1/16W
R120	ERJ3GEYJ152	Carbon 1.5K ohms 1/16W
R121	ERJ3GEYJ102	Carbon 1K ohms 1/16W
R122	ERJ3GEYJ221	Carbon 220 ohms 1/16W
R123	ERJ3GEY0R00	Carbon 0 ohms 1/16W
R127	YWR0816P221D	Metal 220 ohms 1/16W
R128	YWR0816P182D	Metal 1.8K ohms 1/16W
R130	ERJ3GEYJ221	Carbon 220 ohms 1/16W
R131,132	ERJ3GEYJ101	Carbon 100 ohms 1/16W
R137	ERJ3GEYJ562	Carbon 5.6K ohms 1/16W
R138	ERJ3GEY0R00	Carbon 0 ohms 1/16W
R141	ERJ3GEYJ102	Carbon 1K ohms 1/16W
R142	ERJ3GEYJ334	Carbon 330K ohms 1/16W
R143	ERJ3GEYJ224	Carbon 220K ohms 1/16W
R144	ERJ3GEYJ102	Carbon 1K ohms 1/16W
R145,146	ERJ3GEYJ104	Carbon 100K ohms 1/16W
R148	ERJ3GEY0R00	Carbon 0 ohms 1/16W
R149	ERJ3GEYJ223	Carbon 22K ohms 1/16W
R162	ERJ3GEYJ331	Carbon 330 ohms 1/16W
R164,165	ERJ3GEY0R00	Carbon 0 ohms 1/16W
R167-170	ERJ3GEY0R00	Carbon 0 ohms 1/16W
R171	ERJ3GEYJ221	Carbon 220 ohms 1/16W
R172-174	ERJ3GEY0R00	Carbon 0 ohms 1/16W
R179	ERJ3GEYJ332	Carbon 3.3K ohms 1/16W
R180	ERJ3GEYJ221	Carbon 220 ohms 1/16W
VR1	EVM7JGA30B14	Variable Resistor 10K ohms
C1,2	YW5F104Z2VB	Ceramic 0.1 μF
C3	YW5CH150J5VB	Ceramic 15 pF
C4	YW5F104Z2VB	Ceramic 0.1 μF
C5	YW5X122K5VB	Ceramic 1200 pF
C6	YW5F104Z2VB	Ceramic 0.1 μF
C8,9	YW5CH331J5VB	Ceramic 330 pF
C10	YWSK1C106KRC	Electrolytic 10 μF 16V
C12	YW5F104Z2VB	Ceramic 0.1 μF
C13	YW5X103K2VB	Ceramic 0.01 μF

REF.NO.	PART NO.	DESCRIPTION	
C14	YW5CH331J5VB	Ceramic	330 pF
C15	YWSK1C106KRC	Electrolytic	10 µF 16V
C16	YW5F104Z2VB	Ceramic	0.1 µF
C17	YWSK1C105KRA	Electrolytic	1 µF 16V
C18	YW5F104Z2VB	Ceramic	0.1 µF
C19	SK21C225KRA	Electrolytic	2.2 µF 16V
C20	YW5X103K2VB	Ceramic	0.01 µF
C21	SK21C225KRA	Electrolytic	2.2 µF 16V
C22	YW5CH201J5VB	Ceramic	200 pF
C23	YW5F104Z2VB	Ceramic	0.1 µF
C24	YW5CH201J5VB	Ceramic	200 pF
C25	YW5CH060D5VB	Ceramic	6 pF
C26,27	YW5CH121J5VB	Ceramic	120 pF
C29,30	YWSK1C106KRC	Electrolytic	10 µF 16V
C31	ECEV1EV4R7	Electrolytic	4.7 µF 25V
C32	YW5X102K5VB	Ceramic	1000 pF
C33	SK31A475KRA	Electrolytic	4.7 µF 10V
C34,37	YW5F104Z2VB	Ceramic	0.1 µF
C38,39	YW5F104Z2VB	Ceramic	0.1 µF
C40	ECEV0JN100S	Electrolytic	10 µF 6.3V
C41	YW5F104Z2VB	Ceramic	0.1 µF
C42	ECEV0JV330	Electrolytic	33 µF 6.3V
C43,44	ECEV1CV100	Electrolytic	10 µF 16V
C45,47	YW5F104Z2VB	Ceramic	0.1 µF
C49	YW5F104Z2VB	Ceramic	0.1 µF
C50	ECEV1CV100	Electrolytic	10 µF 16V
C51	YW5F104Z2VB	Ceramic	0.1 µF
C52	ECEV1CV100	Electrolytic	10 µF 16V
C53	YW5F104Z2VB	Ceramic	0.1 µF
C56	YW5CH150J5VB	Ceramic	15 pF
C74	YWSK1C105KRA	Electrolytic	1 µF 16V
C75	YW5F104Z2VB	Ceramic	0.1 µF
C76	YW5X102K5VB	Ceramic	1000 pF
C77-81	YW5F104Z2VB	Ceramic	0.1 µF
C82	YW5CH150J5VB	Ceramic	15 pF
L1	EIC4EJ003E	Coil	
L2,4	ELJFC8R2MF	Coil	
L5,6	YWBLM21B03PB	Coil	
X1	YWDX17R734	Crystal Oscillator	
X2	YWDX14R187	Crystal Oscillator	
CF1	YWNL4532S4R4	Filter	
CN1-3	YW51763132	Connector	
TP1-6	YWRCT2125TPV	Test- Pin	
TP8,10	YWRCT2125TPV	Test- Pin	

REF.NO.	PART NO.	DESCRIPTION	
POWER BOARD			
PCB6 (RTL)	YWVKBE550P4A	Printed Circuit Board Assy	
IC1,2	YWMB3782PF	IC	
IC3	YWNJM2902N	IC	
Q3	2SD1819-QRS	Transistor	
Q4	2SB1218-QRS	Transistor	
Q5	2SJ128	Transistor	
Q6	2SD1819-QRS	Transistor	
Q7	2SB1218-QRS	Transistor	
Q8	2SJ132	FET	
Q9	2SA1615-LK	Transistor	
Q10,11	2SD1819-QRS	Transistor	
Q12	2SB1218-QRS	Transistor	
Q13	2SJ132	FET	
Q14	2SA1615-LK	Transistor	
Q15	2SD1819-QRS	Transistor	
Q16	2SJ132	FET	
Q17,18	2SD1819-QRS	Transistor	
Q19	2SB1218-QRS	Transistor	
Q20	2SJ128	Transistor	
Q21	2SD1819-QRS	Transistor	
Q22	2SB1218-QRS	Transistor	
Q23-25	2SJ132	FET	
Q26	2SA1615-LK	Transistor	
Q27	2SD1819-QRS	Transistor	
Q28	2SB1218-QRS	Transistor	
Q29	2SC3074Y	Transistor	
Q30	2SA1615-LK	Transistor	
Q31	2SD1819-QRS	Transistor	
Q39	2SA1615-LK	Transistor	
D1-6	YWSC80204R	Diode	
D8,9	YWSC80204R	Diode	
R1	YWR0816R104D	Metal	100K ohms 1/16W
R2	YWR0816R363D	Metal	36K ohms 1/16W
R3	YWR0816R104D	Metal	100K ohms 1/16W
R4	YWR0816R623D	Metal	62K ohms 1/16W
R5	YWR0816R104D	Metal	100K ohms 1/16W
R6	YWR0816P303D	Metal	30K ohms 1/16W
R7	YWR0816R104D	Metal	100K ohms 1/16W
R8	YWR0816R473D	Metal	47K ohms 1/16W
R9	YWR0816R104D	Metal	100K ohms 1/16W
R10	YWR0816R563D	Metal	56K ohms 1/16W
R11	YWR0816R104D	Metal	100K ohms 1/16W
R12	YWR0816R563D	Metal	56K ohms 1/16W
R13	YWR0816P332D	Metal	3.3K ohms 1/16W
R14	YWR0816P362D	Metal	3.6K ohms 1/16W
R23,24	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R25	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R26-31	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R32	YWR0816P682D	Metal	6.8K ohms 1/16W
R33-37	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R38	ERJ3GEYJ470	Carbon	47 ohms 1/16W

REF.NO.	PART NO.	DESCRIPTION	
R39	YWR0816R513D	Metal	51K ohms 1/16W
R40	YWR0816P203D	Metal	20K ohms 1/16W
R41	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R42	ERJ3GEYJ470	Carbon	47 ohms 1/16W
R43,44	YWR0816P243D	Metal	24K ohms 1/16W
R45	YWR0816P103D	Metal	10K ohms 1/16W
R46	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R47	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R48	YWR0816R433D	Metal	43K ohms 1/16W
R49	YWR0816P153D	Metal	15K ohms 1/16W
R50	YWR0816P123D	Metal	12K ohms 1/16W
R51	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R52	ERJ3GEYJ470	Carbon	47 ohms 1/16W
R53,54	YWR0816P333D	Metal	33K ohms 1/16W
R55	YWR0816P103D	Metal	10K ohms 1/16W
R56	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R57	YWR0816R473D	Metal	47K ohms 1/16W
R58	YWR0816P333D	Metal	33K ohms 1/16W
R59	YWR0816P123D	Metal	12K ohms 1/16W
R60	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R61	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R62	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R63	ERJ3GEYJ470	Carbon	47 ohms 1/16W
R64	YWR0816P243D	Metal	24K ohms 1/16W
R65	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R66	YWR0816P153D	Metal	15K ohms 1/16W
R67	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R68-70	ERJ3GEYJ470	Carbon	47 ohms 1/16W
R71	YWR0816R683D	Metal	68K ohms 1/16W
R72	YWR0816P203D	Metal	20K ohms 1/16W
R73	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R74	YWR0816P103D	Metal	10K ohms 1/16W
R75	YWR0816P302D	Metal	3K ohms 1/16W
R76	YWR0816P103D	Metal	10K ohms 1/16W
R77	YWR0816P302D	Metal	3K ohms 1/16W
R78	ERJ3GEYJ471	Carbon	470 ohms 1/16W
R79	ERJ3GEYJ680	Carbon	68 ohms 1/16W
R80	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R81	YWR0816R683D	Metal	68K ohms 1/16W
R82	YWR0816P432D	Metal	4.3K ohms 1/16W
R83	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R84	YWR0816P103D	Metal	10K ohms 1/16W
R85	YWR0816P302D	Metal	3K ohms 1/16W
R103	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R106	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R107	ERJ3GEYJ202	Carbon	2K ohms 1/16W
R116	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R120,121	ERJ3GEY0R00	Carbon	0 ohms 1/16W
VR1	YWRH03AVAJ2W	Variable Resistor	220 ohms
VR2	YWRH03AVAJ3W	Variable Resistor	2.2K ohms
C1	YW5X103K2VB	Ceramic	0.01 μF
C2	YW5F473Z2VB	Ceramic	0.047 μF

REF.NO.	PART NO.	DESCRIPTION	
C3,4	YW5X103K2VB	Ceramic	0.01 μF
C5	YW5F473Z2VB	Ceramic	0.047 μF
C6	YW5X103K2VB	Ceramic	0.01 μF
C7	YW5F104Z2VB	Ceramic	0.1 μF
C9	YW5F683Z2VB	Ceramic	0.068 μF
C10	YW5F104Z2VB	Ceramic	0.1 μF
C11,12	YW5F683Z2VB	Ceramic	0.068 μF
C13	YW400102CHJT	Ceramic	1000 pF
C14	YW5F683Z2VB	Ceramic	0.068 μF
C15	YW5F104Z2VB	Ceramic	0.1 μF
C16,17	YW5F683Z2VB	Ceramic	0.068 μF
C18	YW16SA68M	Electrolytic	68 μF 16V
C19	YW5F104Z2VB	Ceramic	0.1 μF
C20	YW16SA33M	Electrolytic	33 μF 16V
C21	YW20SA68M	Electrolytic	68 μF 20V
C22	YW20SA100M	Electrolytic	100 μF 20V
C23	YW5F104Z2VB	Ceramic	0.1 μF
C24	YW16SA100M	Electrolytic	100 μF 16V
C25	YW5X103K2VB	Ceramic	0.01 μF
C26	ECA1AFQ331	Electrolytic	330 μF 10V
C27	YW5F104Z2VB	Ceramic	0.1 μF
C28	YW16SA100M	Electrolytic	100 μF 16V
C29	YW5X103K2VB	Ceramic	0.01 μF
C30	ECA1AFQ181	Electrolytic	180 μF 10V
C31	YW5F104Z2VB	Ceramic	0.1 μF
C32	UPQ1A331MGH	Electrolytic	330 μF 10V
C33	YW10SA33M	Electrolytic	33 μF 10V
C34	YW5F104Z2VB	Ceramic	0.1 μF
C35	YW10SA100M	Electrolytic	100 μF 10V
C36	YW5X103K2VB	Ceramic	0.01 μF
C37	ECA0JFQ471	Electrolytic	470 μF 6.3V
C38	UPQ1V101MGH	Electrolytic	100 μF 35V
C39	YW5F104Z2VB	Ceramic	0.1 μF
C40	UPQ1V101MGH	Electrolytic	100 μF 35V
C41	ECA1VFQ560	Electrolytic	56 μF 35V
C42	YW5X103K2VB	Ceramic	0.01 μF
C43	ECA0JFQ681	Electrolytic	680 μF 6.3V
C46	YW5F104Z2VB	Ceramic	0.1 μF
C48	YW5CH200J5VB	Ceramic	20 pF
L1	S100434182K	Coil	
L2	YWS100529220	Coil	22 μH
L3	YWS100518220	Coil	22 μH
L4	S100434560K	Coil	56 μH
L5	S100434391K	Coil	390 μH
L6	S100434181K	Coil	180 μH
L7	YWS100518220	Coil	
L8	YFLH10D500K	Coil	50 μH
L9	S100434561K	Coil	560 μH
L10	YWS100529220	Coil	
L11-13	YWBLM21B03PB	Coil	
CN1,2	YW51756394	24-pin Connector	
TP1-3	YWRCT2125TPV	Test- Pin	
M19	YWV6FA0166A4	Bracket	

REAR BOARD

REF.NO.	PART NO.	DESCRIPTION
PCB7 (RTL)	YWVKCE550P4A	Printed Circuit Board Assy
IC1	YWUPD4053BG	IC
IC2	YWUPD74HC08G	IC
IC5	NJM4556M	IC
IC6	NJM2903M	IC
IC7	YWUPD4050BG	IC
IC8	YWTC4S11F	IC
IC9,10	YWTC4S584FR	IC
IC11,12	YWTC4S69F	IC
IC13	YWTC4W53FL	IC
Q1	IMZ1T9	Transistor
D1	LN277RPX	LED
D2	MA143	Diode
D3	MA141K	Diode
D4	MA143	Diode
D5-7	YWERB83004	Diode
D8,9	MA143	Diode
R1	ERJ3GEYJ751	Carbon 750 ohms 1/16W
R2,3	ERJ3GEYJ473	Carbon 47K ohms 1/16W
R4	ERJ3GEYJ101	Carbon 100 ohms 1/16W
R5,6	YWR0816P222D	Metal 2.2K ohms 1/16W
R7	ERJ3GEYJ510	Carbon 51 ohms 1/16W
R8	YWR0816R513D	Metal 51K ohms 1/16W
R9	ERJ3GEYJ101	Carbon 100 ohms 1/16W
R10	ERJ3GEYJ104	Carbon 100K ohms 1/16W
R11	ERJ3GEYJ102	Carbon 1K ohms 1/16W
R12	ERJ3GEYJ473	Carbon 47K ohms 1/16W
R13,14	ERJ3GEYJ221	Carbon 220 ohms 1/16W
R15,16	ERJ3GEYJ472	Carbon 4.7K ohms 1/16W
R17-24	ERJ3GEYJ104	Carbon 100K ohms 1/16W
R25,26	ERJ3GEYJ750	Carbon 75 ohms 1/16W
R27-31	ERJ3GEYJ680	Carbon 68 ohms 1/16W
R32	ERJ3GEYJ100	Carbon 10 ohms 1/16W
R33	ERJ3GEYJ221	Carbon 220 ohms 1/16W
R34	ERJ3GEYJ680	Carbon 68 ohms 1/16W
R35	ERJ3GEYJ221	Carbon 220 ohms 1/16W
R36-38	ERJ3GEYJ680	Carbon 68 ohms 1/16W
R40,41	ERJ3GEYJ221	Carbon 220 ohms 1/16W
R42	ERJ3GEYJ680	Carbon 68 ohms 1/16W
C1	ECEA0JKG470	Electrolytic 47 µF 6.3V
C2	YW5CH101J5VB	Ceramic 100 pF
C3	YW5F104Z2VB	Ceramic 0.1 µF
C4	ECEA1AKG220	Electrolytic 22 µF 10V
C5	YW5X102K5VB	Ceramic 1000 pF
C6	ECEA0JKG470	Electrolytic 47 µF 6.3V
C7	YW5CH101J5VB	Ceramic 100 pF
C8	ECEA0JKG470	Electrolytic 47 µF 6.3V
C9-12	YW5F104Z2VB	Ceramic 0.1 µF
C13	ECEA1AKG220	Electrolytic 22 µF 10V
L1	YWNL32330J	Coil
SW1	YWSKHHQN	Push Switch
SW2-4	YWSKHHPP	Push Switch
SW5	YWSSS222AN	Slide Switch
CF1-3	NFM6130T472B	Filter
CN1-3	YW51746434	24 pin Connector
CN4	10A10TR12SB	12-pin Connector
CN5	10A13TR20PB	20-pin Connector
CN6	YWSDEB9S05	9-pin Connector
CN7	YWPCRE28MD	28-pin Connector
CN8	HR10A10R12PB	12-pin Connector
CN9	YWHR10A7R4PB	4-pin Connector
CN10-12	YWBNCDRD	BNC Connector
F1	YWSSFC1R6AT4	Current Fuse 1.6A
E1	YWHDLNA	Fuse Holder
M22	YWV6FA0167A2	Bracket for Earth
M23	YWA2NE0257A4	Spacer

PRE PROCESS BOARD

REF.NO.	PART NO.	DESCRIPTION
PCB8 (RTL)	YWVKZE550P2A	Printed Circuit Board Assy
IC1	YWUPD4050BG	IC
IC3	NJM2902M	IC
IC5	NJM2904M	IC
IC6	YWUPC4064G2	IC
IC7	YWTC4W53FL	IC
IC8	NJM2902M	IC
IC101	NJM2904M	IC
IC102	YWUPD4053BG	IC
IC103	NJM3414M	IC
IC104,105	YWTC4W53FL	IC
IC106,201	NJM2904M	IC
IC202	YWUPD4053BG	IC
IC203	NJM3414M	IC
IC204,205	YWTC4W53FL	IC
IC206,301	NJM2904M	IC
IC302	YWUPD4053BG	IC
IC303	NJM3414M	IC
IC304,305	YWTC4W53FL	IC
IC306	NJM2904M	IC
Q1	2SB766-RS	Transistor
Q2	2SD874A-RS	Transistor
Q3	2SB766-RS	Transistor
Q4-6	2SB1218-QRS	Transistor
Q7,8	2SD1819-QRS	Transistor
Q9	2SB1218-QRS	Transistor
Q10-13	2SD1819-QRS	Transistor
Q14	2SB1218-QRS	Transistor
Q15-19	2SD1819-QRS	Transistor
Q101-103	2SC3931-CD	Transistor

REF.NO.	PART NO.	DESCRIPTION	
Q104	2SK662-PQR	FET	
Q105	XN6534	Transistor	
Q106	XN6435	Transistor	
Q107	UMZ1	Transistor	
Q108	XN6435	Transistor	
Q110	2SC3931-CD	Transistor	
Q111	2SK662-PQR	FET	
Q112	UMZ1	Transistor	
Q113-124	2SA1532-CD	Transistor	
Q125	2SC3931-CD	Transistor	
Q126	XN6435	Transistor	
Q127	2SK662-PQR	FET	
Q128,201	2SC3931-CD	Transistor	
Q202,203	2SC3931-CD	Transistor	
Q204	2SK662-PQR	FET	
Q205	XN6534	Transistor	
Q206	XN6435	Transistor	
Q207	UMZ1	Transistor	
Q208	XN6435	Transistor	
Q210	2SC3931-CD	Transistor	
Q211	2SK662-PQR	FET	
Q212	UMZ1	Transistor	
Q213-224	2SA1532-CD	Transistor	
Q225	2SC3931-CD	Transistor	
Q226	XN6435	Transistor	
Q227	2SK662-PQR	FET	
Q228,301	2SC3931-CD	Transistor	
Q302,303	2SC3931-CD	Transistor	
Q304	2SK662-PQR	FET	
Q305	XN6534	Transistor	
Q306	XN6435	Transistor	
Q307	UMZ1	Transistor	
Q308	XN6435	Transistor	
Q310	2SC3931-CD	Transistor	
Q311	2SK662-PQR	FET	
Q312	UMZ1	Transistor	
Q313-324	2SA1532-CD	Transistor	
Q325	2SC3931-CD	Transistor	
Q326	XN6435	Transistor	
Q327	2SK662-PQR	FET	
Q328	2SC3931-CD	Transistor	
D2,101	MA141K	Diode	
D102,201	MA141K	Diode	
D301,302	MA141K	Diode	
D302	MA141A	Diode	
TH130,230	L311J101J332	Thermistor	
TH330	L311J101J332	Thermistor	
R1	ERJ3GEYJ334	Carbon	330K 1/16W
R2	ERJ3GEYJ224	Carbon	220K ohms 1/16W
R3	ERJ3GEYJ333	Carbon	33K ohms 1/16W
R4	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R5	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R6	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R7	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R8	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R9	ERJ3GEYJ333	Carbon	33K ohms 1/16W

REF.NO.	PART NO.	DESCRIPTION	
R10	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R11	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R12	ERJ3GEYJ333	Carbon	33K ohms 1/16W
R13	ERJ3GEYJ334	Carbon	330K ohms 1/16W
R14	ERJ3GEYJ224	Carbon	220K ohms 1/16W
R16	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R17	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R18-22	YWR0816R473D	Metal	47K ohms 1/16W
R23	YWR0816R513D	Metal	51K ohms 1/16W
R24	YWR0816R473D	Metal	47K ohms 1/16W
R25	YWR0816R363D	Metal	36K ohms 1/16W
R26	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R27,28	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R29	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R30-32	YWR0816R473D	Metal	47K ohms 1/16W
R33	YWR0816R623D	Metal	62K ohms 1/16W
R34	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R35	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R36	YWR0816P103D	Metal	10K ohms 1/16W
R37	YWR0816P132D	Metal	1.3K ohms 1/16W
R38	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R39	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R40	YWR0816R473D	Metal	47K ohms 1/16W
R41	YWR0816R563D	Metal	56K ohms 1/16W
R42,43	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R44	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R45	ERJ3GEYJ682	Carbon	6.8K ohms 1/16W
R46	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R47	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R48	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R49	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R50	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R51,52	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R53	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R54,55	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R56,57	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R58	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R59	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R60	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R61	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R62	ERJ3GEYJ682	Carbon	6.8K ohms 1/16W
R63,64	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R65	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R66,67	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R68,69	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R70	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R71	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R72	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R73	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R74	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R75	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R76	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R77	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R78-81	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R82-93	ERJ3GEYJ473	Carbon	47K ohms 1/16W

REF.NO.	PART NO.	DESCRIPTION	
R94-96	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R97	ERJ3GEYJ333	Carbon	33K ohms 1/16W
R98	YWR0816P472D	Metal	4.7K ohms 1/16W
R99	YWR0816P751D	Metal	750 ohms 1/16W
R101	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R102	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R103	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R104,105	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R106	YWR0816P101D	Metal	100 ohms 1/16W
R107	YWR0816P222D	Metal	2.2K ohms 1/16W
R108	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R109	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R110	ERJ3GEYJ100	Carbon	10 ohms 1/16W
R111,112	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R113	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R114	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R115,116	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R117,118	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R119	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R120,121	YWR0816P101D	Metal	100 ohms 1/16W
R122	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R123	YWR0816P152D	Metal	1.5K ohms 1/16W
R124	YWR0816P102D	Metal	1K ohms 1/16W
R125	YWR0816P152D	Metal	1.5K ohms 1/16W
R126	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R127	YWR0816P822D	Metal	8.2K ohms 1/16W
R128	YWR0816R473D	Metal	47K ohms 1/16W
R129	YWR0816P103D	Metal	10K ohms 1/16W
R131	YWR0816P752D	Metal	7.5K ohms 1/16W
R132,133	YWR0816P203D	Metal	20K ohms 1/16W
R135	YWR0816P472D	Metal	4.7K ohms 1/16W
R136	YWR0816P203D	Metal	20K ohms 1/16W
R137	YWR0816P103D	Metal	10K ohms 1/16W
R139	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R140	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R141,142	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R143,144	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R145	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R146	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R147	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R148	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R149	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R150	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R151	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R152	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R153	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R154	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R155	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R156	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R157	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R158	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R159	YWR0816P222D	Metal	2.2K ohms 1/16W
R160	YWR0816P331D	Metal	330 ohms 1/16W
R161	YWR0816P103D	Metal	10K ohms 1/16W
R162	YWR0816P223D	Metal	22K ohms 1/16W

REF.NO.	PART NO.	DESCRIPTION	
R163	YWR0816P272D	Metal	2.7K ohms 1/16W
R164	YWR0816P301D	Metal	300 ohms 1/16W
R165	YWR0816R683D	Metal	68K ohms 1/16W
R166	YWR0816P223D	Metal	22K ohms 1/16W
R167	YWR0816P103D	Metal	10K ohms 1/16W
R168	YWR0816P202D	Metal	2K ohms 1/16W
R169	YWR0816R683D	Metal	68K ohms 1/16W
R170	YWR0816P223D	Metal	22K ohms 1/16W
R171,172	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R173	YWR0816P202D	Metal	2K ohms 1/16W
R174,175	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R176	YWR0816P182D	Metal	1.8K ohms 1/16W
R177	YWR0816P471D	Metal	470 ohms 1/16W
R178	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R179	YWR0816P471D	Metal	470 ohms 1/16W
R180	YWR0816P102D	Metal	1K ohms 1/16W
R181	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R182	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R183	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R184	YWR0816P152D	Metal	1.5K ohms 1/16W
R185	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R186	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R187	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R188	ERJ3GEYJ682	Carbon	6.8K ohms 1/16W
R189	ERJ3GEYJ471	Carbon	470 ohms 1/16W
R190	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R191	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R201	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R202	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R203	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R204,205	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R206	YWR0816P101D	Metal	100 ohms 1/16W
R207	YWR0816P202D	Metal	2K ohms 1/16W
R208	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R209	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R210	ERJ3GEYJ100	Carbon	10 ohms 1/16W
R211,212	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R213	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R214	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R215,216	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R217,218	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R219	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R220,221	YWR0816P101D	Metal	100 ohms 1/16W
R222	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R223	YWR0816P152D	Metal	1.5K ohms 1/16W
R224	YWR0816P102D	Metal	1K ohms 1/16W
R225	YWR0816P152D	Metal	1.5K ohms 1/16W
R226	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R227	YWR0816P822D	Metal	8.2K ohms 1/16W
R228	YWR0816R473D	Metal	47K ohms 1/16W
R229	YWR0816P103D	Metal	10K ohms 1/16W
R231	YWR0816P752D	Metal	7.5K ohms 1/16W
R232,233	YWR0816P203D	Metal	20K ohms 1/16W
R235	YWR0816P472D	Metal	4.7K ohms 1/16W
R236	YWR0816P203D	Metal	20K ohms 1/16W

REF.NO.	PART NO.	DESCRIPTION	
R237	YWR0816P103D	Metal	10K ohms 1/16W
R238	YWR0816P203D	Metal	20K ohms 1/16W
R239	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R240	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R241,242	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R243,244	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R245	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R246	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R247	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R248	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R249	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R250	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R251	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R252	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R253	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R254	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R255	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R256	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R257	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R258	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R259	YWR0816P222D	Metal	2.2K ohms 1/16W
R260	YWR0816P331D	Metal	330 ohms 1/16W
R261	YWR0816P103D	Metal	10K ohms 1/16W
R262	YWR0816P223D	Metal	22K ohms 1/16W
R263	YWR0816P272D	Metal	2.7K ohms 1/16W
R264	YWR0816P301D	Metal	300 ohms 1/16W
R265	YWR0816R683D	Metal	68K ohms 1/16W
R266	YWR0816P223D	Metal	22K ohms 1/16W
R267	YWR0816P103D	Metal	10K ohms 1/16W
R268	YWR0816P202D	Metal	2K ohms 1/16W
R269	YWR0816R683D	Metal	68K ohms 1/16W
R270	YWR0816P223D	Metal	22K ohms 1/16W
R271,272	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R273	YWR0816P202D	Metal	2K ohms 1/16W
R274,275	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R276	YWR0816P182D	Metal	1.8K ohms 1/16W
R277	YWR0816P471D	Metal	470 ohms 1/16W
R278	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R279	YWR0816P471D	Metal	470 ohms 1/16W
R280	YWR0816P102D	Metal	1K ohms 1/16W
R281	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R282	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R283	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R284	YWR0816P152D	Metal	1.5K ohms 1/16W
R285	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R286	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R287	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R288	ERJ3GEYJ682	Carbon	6.8K ohms 1/16W
R289	ERJ3GEYJ471	Carbon	470 ohms 1/16W
R290	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R301	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R302	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R303	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R304,305	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R306	YWR0816P101D	Metal	100 ohms 1/16W

REF.NO.	PART NO.	DESCRIPTION	
R307	YWR0816P222D	Metal	2.2K ohms 1/16W
R308	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R309	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R310	ERJ3GEYJ100	Carbon	10 ohms 1/16W
R311,312	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R313	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R314	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R315,316	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R317,318	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R319	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R320,321	YWR0816P101D	Metal	100 ohms 1/16W
R322	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R323	YWR0816P152D	Metal	1.5K ohms 1/16W
R324	YWR0816P102D	Metal	1K ohms 1/16W
R325	YWR0816P152D	Metal	1.5K ohms 1/16W
R326	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R327	YWR0816P822D	Metal	8.2K ohms 1/16W
R328	YWR0816R473D	Metal	47K ohms 1/16W
R329	YWR0816P103D	Metal	10K ohms 1/16W
R331	YWR0816P752D	Metal	7.5K ohms 1/16W
R332,333	YWR0816P203D	Metal	20K ohms 1/16W
R335	YWR0816P472D	Metal	4.7K ohms 1/16W
R336	YWR0816P203D	Metal	20K ohms 1/16W
R337	YWR0816P103D	Metal	10K ohms 1/16W
R339	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R340	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R341,342	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R343,344	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R345	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R346	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R347	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R348	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R349	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R350	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R351	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R352	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R353	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R354	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R355	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R356	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R357	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R358	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R359	YWR0816P222D	Metal	2.2K ohms 1/16W
R360	YWR0816P331D	Metal	330 ohms 1/16W
R361	YWR0816P103D	Metal	10K ohms 1/16W
R362	YWR0816P223D	Metal	22K ohms 1/16W
R363	YWR0816P272D	Metal	2.7K ohms 1/16W
R364	YWR0816P301D	Metal	300 ohms 1/16W
R365	YWR0816R683D	Metal	68K ohms 1/16W
R366	YWR0816P223D	Metal	22K ohms 1/16W
R367	YWR0816P103D	Metal	10K ohms 1/16W
R368	YWR0816P202D	Metal	2K ohms 1/16W
R369	YWR0816R683D	Metal	68K ohms 1/16W
R370	YWR0816P223D	Metal	22K ohms 1/16W
R371,372	ERJ3GEYJ101	Carbon	100 ohms 1/16W

REF.NO.	PART NO.	DESCRIPTION
R373	YWR0816P202D	Metal 2K ohms 1/16W
R374,375	ERJ3GEYJ153	Carbon 15K ohms 1/16W
R376	YWR0816P182D	Metal 1.8K ohms 1/16W
R377	YWR0816P471D	Metal 470 ohms 1/16W
R378	ERJ3GEYJ223	Carbon 22K ohms 1/16W
R379	YWR0816P471D	Metal 470 ohms 1/16W
R380	YWR0816P102D	Metal 1K ohms 1/16W
R381	ERJ3GEYJ101	Carbon 100 ohms 1/16W
R382	ERJ3GEYJ223	Carbon 22K ohms 1/16W
R383	ERJ3GEYJ101	Carbon 100 ohms 1/16W
R384	YWR0816P152D	Metal 1.5K ohms 1/16W
R385	ERJ3GEYJ222	Carbon 2.2K ohms 1/16W
R386	ERJ3GEYJ102	Carbon 1K ohms 1/16W
R387	ERJ3GEY0R00	Carbon 0 ohms 1/16W
R388	ERJ3GEYJ682	Carbon 6.8K ohms 1/16W
R389	ERJ3GEYJ471	Carbon 470 ohms 1/16W
R390	ERJ3GEYJ102	Carbon 1K ohms 1/16W
R391	ERJ3GEYJ103	Carbon 10K ohms 1/16W
R400	YWR0816P102D	Metal 1K ohms 1/16W
R401	YWR0816P121D	Metal 120 ohms 1/16W
R402	YWR0816P331D	Metal 330 ohms 1/16W
R403	YWR0816Q470D	Metal 47 ohms 1/16W
R404	YWR0816P181D	Metal 180 ohms 1/16W
R405	YWR0816Q470D	Metal 47 ohms 1/16W
R406	YWR0816P101D	Metal 100 ohms 1/16W
R407	YWR0816Q150D	Metal 15 ohms 1/16W
VR1-14	EVM7JGA30B54	Variable Resistor 50K ohms
VR101	EVM7JGA30B53	Variable Resistor 5K ohms
VR102-104	EVM7JGA30B15	Variable Resistor 100K ohms
VR105	EVM7JGA30B14	Variable Resistor 10K ohms
VR106,107	EVM7JGA30B15	Variable Resistor 100K ohms
VR108-110	EVM7JGA30B13	Variable Resistor 1K ohms
VR111	EVM7JGA30B24	Variable Resistor 20K ohms
VR201	EVM7JGA30B14	Variable Resistor 10K ohms
VR202-204	EVM7JGA30B15	Variable Resistor 100K ohms
VR205	EVM7JGA30B14	Variable Resistor 10K ohms
VR206,207	EVM7JGA30B15	Variable Resistor 100K ohms
VR208-210	EVM7JGA30B13	Variable Resistor 1K ohms
VR301	EVM7JGA30B23	Variable Resistor 2K ohms
VR302-304	EVM7JGA30B15	Variable Resistor 100K ohms
VR305	EVM7JGA30B14	Variable Resistor 10K ohms
VR306,307	EVM7JGA30B15	Variable Resistor 100K ohms
VR308-310	EVM7JGA30B13	Variable Resistor 1K ohms
VR311	EVM7JGA30B24	Variable Resistor 20K ohms
C1	ECEV1HN010SR	Electrolytic 1 μF 50V
C3	YW5CH151J5VB	Ceramic 150 pF
C7	YW5X103K2VB	Ceramic 0.01 μF
C8,9	ECEV1CV100	Electrolytic 10 μF 16V
C10	ECEV1CV470	Electrolytic 47 μF 16V
C11	ECEV1CV100	Electrolytic 10 μF 16V
C12	ECEV0JV101	Electrolytic 100 μF 6.3V
C13	SK21C336KRD0	Electrolytic 33 μF 16V
C14	ECEV0JV101	Electrolytic 100 μF 6.3V
C15	SK21A476KRD0	Electrolytic 47 μF 10V
C16	ECEV1CV100	Electrolytic 10 μF 16V

REF.NO.	PART NO.	DESCRIPTION
C17	YW5CH101J5VB	Ceramic 100 pF
C18	YW5X103K2VB	Ceramic 0.01 μF
C19	YWSK1C105KRA	Electrolytic 1 μF 16V
C20	YW5X103K2VB	Ceramic 0.01 μF
C21-24	ECEV1CV100	Electrolytic 10 μF 16V
C25-30	YW5F104Z2VB	Ceramic 0.1 μF
C31	SK31A106KRB	Electrolytic 10 μF 10V
C101	ECEV1CV100	Electrolytic 10 μF 16V
C102	YWSK1C106KRC	Electrolytic 10 μF 16V
C103	YW5CH150J5VB	Ceramic 15 pF
C104	YW5F104Z2VB	Ceramic 0.1 μF
C105	YW5CH030D5VB	Ceramic 3 pF
C107	YW5CH020D5VB	Ceramic 2 pF
C108	ECEV1CN100	Electrolytic 10 μF 16V
C109,110	ECEV1HN010SR	Electrolytic 10 μF 50V
C111,114	ECEV1CV100	Electrolytic 10 μF 16V
C115	YW5F104Z2VB	Ceramic 0.1 μF
C116	YW5CH471J5VB	Ceramic 470 pF
C117	YW5CH030D5VB	Ceramic 3 pF
C118	YW5F104Z2VB	Ceramic 0.1 μF
C119	ECEV0GV101S	Electrolytic 100 μF 4V
C120	YWSK1C106KRC	Electrolytic 10 μF 16V
C124	ECEV1CV100	Electrolytic 10 μF 16V
C125	YW5F104Z2VB	Ceramic 0.1 μF
C126,127	ECEV1CV100	Electrolytic 10 μF 16V
C128	YW5X103K2VB	Ceramic 0.01 μF
C130,132	YW5F104Z2VB	Ceramic 0.1 μF
C133-135	YW5F104Z2VB	Ceramic 0.1 μF
C136	SK21D106KRC	Electrolytic 10 μF 16V
C137	ECEV1CV100	Electrolytic 10 μF 16V
C140	YW5CH270J5VB	Ceramic 27 pF
C141	YW5X103K2VB	Ceramic 0.01 μF
C143	ECEV1CV100	Electrolytic 10 μF 16V
C144	YW5F104Z2VB	Ceramic 0.1 μF
C145	ECEV1CV100	Electrolytic 10 μF 16V
C146,147	YW5F104Z2VB	Ceramic 0.1 μF
C148	YW5CH050D5VB	Ceramic 5 pF
C149	ECEV1CV470	Electrolytic 47 μF 16V
C201	ECEV1CV100	Electrolytic 10 μF 16V
C202	YWSK1C106KRC	Electrolytic 10 μF 16V
C203	YW5CH150J5VB	Ceramic 15 pF
C204	YW5F104Z2VB	Ceramic 0.1 μF
C207	YW5CH050D5VB	Ceramic 5 pF
C208	ECEV1CN100	Electrolytic 10 μF 16V
C209,210	ECEV1HN010SR	Electrolytic 1 μF 50V
C211,214	ECEV1CV100	Electrolytic 10 μF 16V
C215	YW5F104Z2VB	Ceramic 0.1 μF
C216	YW5CH471J5VB	Ceramic 470 pF
C217	YW5CH030D5VB	Ceramic 3 pF
C218	YW5F104Z2VB	Ceramic 0.1 μF
C219	ECEV0GV101S	Electrolytic 100 μF 4V
C220	YWSK1C106KRC	Electrolytic 10 μF 16V
C224	ECEV1CV100	Electrolytic 10 μF 16V
C225	YW5F104Z2VB	Ceramic 0.1 μF
C226,227	ECEV1CV100	Electrolytic 10 μF 16V

REF.NO.	PART NO.	DESCRIPTION	
C228	YW5X103K2VB	Ceramic	0.01 µF
C230,232	YW5F104Z2VB	Ceramic	0.1 µF
C233-235	YW5F104Z2VB	Ceramic	0.1 µF
C236	SK21D106KRC	Electrolytic	10 µF 16V
C237	ECEV1CV100	Electrolytic	10 µF 16V
C240	YW5CH270J5VB	Ceramic	27 pF
C241	YW5X103K2VB	Ceramic	0.01 µF
C243	ECEV1CV100	Electrolytic	10 µF 16V
C244	YW5F104Z2VB	Ceramic	0.1 µF
C245	ECEV1CV100	Electrolytic	10 µF 16V
C246,247	YW5F104Z2VB	Ceramic	0.1 µF
C248	YW5CH050D5VB	Ceramic	5 pF
C249	ECEV1CV470	Electrolytic	47 µF 16V
C301	ECEV1CV100	Electrolytic	10 µF 16V
C302	YWSK1C106KRC	Electrolytic	10 µF 16V
C303	YW5CH150J5VB	Ceramic	15 pF
C304	YW5F104Z2VB	Ceramic	0.1 µF
C305	YW5CH030D5VB	Ceramic	3 pF
C307	YW5CH020D5VB	Ceramic	2 pF
C308	ECEV1CN100	Electrolytic	10 µF 16V
C309,310	ECEV1HN010SR	Electrolytic	1 µF 50V
C311,314	ECEV1CV100	Electrolytic	10 µF 16V
C315	YW5F104Z2VB	Ceramic	0.1 µF
C316	YW5CH471J5VB	Ceramic	470 pF
C317	YW5CH030D5VB	Ceramic	3 pF
C318	YW5F104Z2VB	Ceramic	0.1 µF
C319	ECEV0GV101S	Electrolytic	100 µF 4V
C320	YWSK1C106KRC	Electrolytic	10 µF 16V
C324	ECEV1CV100	Electrolytic	10 µF 16V
C325	YW5F104Z2VB	Ceramic	0.1 µF
C326,327	ECEV1CV100	Electrolytic	10 µF 16V
C328	YW5X103K2VB	Ceramic	0.01 µF
C330,332	YW5F104Z2VB	Ceramic	0.1 µF
C333-335	YW5F104Z2VB	Ceramic	0.1 µF
C336	SK21D106KRC	Electrolytic	10 µF 16V
C337	ECEV1CV100	Electrolytic	10 µF 16V
C340	YW5CH270J5VB	Ceramic	27 pF
C341	YW5X103K2VB	Ceramic	0.01 µF
C343	ECEV1CV100	Electrolytic	10 µF 16V
C344	YW5F104Z2VB	Ceramic	0.1 µF
C345	ECEV1CV100	Electrolytic	10 µF 16V
C346,347	YW5F104Z2VB	Ceramic	0.1 µF
C348	YW5CH050D5VB	Ceramic	5 pF
C349	ECEV1CV470	Electrolytic	47 µF 16V
CN1-3	YW51756394	Connector	
TP1,101	YWRCT2125TPV	Test- Pin	
TP102-106	YWRCT2125TPV	Test- Pin	
TP201-206	YWRCT2125TPV	Test- Pin	
TP301-306	YWRCT2125TPV	Test- Pin	

MOTHER BOARD

REF.NO.	PART NO.	DESCRIPTION	
PCB9 (RTL)	YWVKBE550P2A	Printed Circuit Board Assy	
IC1	YWUPD4051BG	IC	
IC2	NJM2902M	IC	
IC3,4	YWUPD4066BG	IC	
IC5,6	YWTC4S66FR	IC	
IC7	NJM2904M	IC	
IC8	YWNJM2902N	IC	
IC9	MC74HC4040F	IC	
IC10	YWMC74HC10F	IC	
IC11	YWMC74HC74AF	IC	
Q1	2SD1819-QRS	Transistor	
Q2	2SB1218A-QR	Transistor	
Q3-12	2SD1819-QRS	Transistor	
Q16	2SB1218A-QR	Transistor	
Q17,18	2SD1819-QRS	Transistor	
Q19	2SB1218A-QR	Transistor	
Q20	2SD874A-RS	Transistor	
Q21	2SB1218A-QR	Transistor	
Q22	2SB766A-QR	Transistor	
Q23	2SD1819-QRS	Transistor	
Q24	2SB766A-QR	Transistor	
Q25	2SD1819-QRS	Transistor	
Q26	2SB766A-QR	Transistor	
Q27	2SD1819-QRS	Transistor	
Q28	2SD1979	Transistor	
Q29	2SB1218A-QR	Transistor	
D1	MA5082	Diode	
D2	MA143	Diode	
D6	MA159	Diode	
R1-4	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R5	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R6	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R8	YWR0816P622D	Metal	6.2K ohms 1/16W
R9	YWR0816P103D	Metal	10K ohms 1/16W
R10	YWR0816P562D	Metal	5.6K ohms 1/16W
R11	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R12	YWR0816P183D	Metal	18K ohms 1/16W
R13	YWR0816P432D	Metal	4.3K ohms 1/16W
R14	YWR0816R363D	Metal	36K ohms 1/16W
R15	YWR0816P153D	Metal	15K ohms 1/16W
R16	YWR0816P183D	Metal	18K ohms 1/16W
R17	YWR0816R363D	Metal	36K ohms 1/16W
R18-21	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R22-29	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R30-33	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R34	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R35	ERJ3GEYJ622	Carbon	6.2K ohms 1/16W
R36	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R37	ERJ3GEYJ622	Carbon	6.2K ohms 1/16W
R38-43	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R44	ERJ3GEYJ223	Carbon	22K ohms 1/16W

REF.NO.	PART NO.	DESCRIPTION
R45-56	ERJ3GEYJ473	Carbon 47K ohms 1/16W
R62-64	ERJ3GEYJ105	Carbon 1M ohms 1/16W
R65,66	ERJ3GEYJ150	Carbon 15 ohms 1/16W
R67	ERJ3GEYJ103	Carbon 10K ohms 1/16W
R68	ERJ3GEYJ223	Carbon 22K ohms 1/16W
R69	ERJ3GEYJ333	Carbon 33K ohms 1/16W
R70,71	ERJ3GEYJ104	Carbon 100K ohms 1/16W
R72	YWR0816P183D	Metal 18K ohms 1/16W
R73	YWR0816R334D	Metal 330K ohms 1/16W
R74	ERJ3GEYJ331	Carbon 330 ohms 1/16W
R75	ERJ3GEYJ102	Carbon 1K ohms 1/16W
R76	YWR0816R124D	Metal 120K ohms 1/16W
R77	YWR0816P303D	Metal 30K ohms 1/16W
R78	ERJ3GEYJ331	Carbon 330 ohms 1/16W
R79	ERJ3GEYJ102	Carbon 1K ohms 1/16W
R80	YWR0816P203D	Metal 20K ohms 1/16W
R81	YWR0816P303D	Metal 30K ohms 1/16W
R86	ERJ3GEYJ331	Carbon 330 ohms 1/16W
R87	ERJ3GEYJ102	Carbon 1K ohms 1/16W
R88	YWR0816P302D	Metal 3K ohms 1/16W
R89	YWR0816P183D	Metal 18K ohms 1/16W
R90	YWR0816P223D	Metal 22K ohms 1/16W
R91	YWR0816P303D	Metal 30K ohms 1/16W
R96	ERJ3GEYJ331	Carbon 330 ohms 1/16W
R97	ERJ3GEYJ102	Carbon 1K ohms 1/16W
R98	YWR0816P203D	Metal 20K ohms 1/16W
R99	YWR0816R683D	Metal 68K ohms 1/16W
R100	YWR0816P223D	Metal 22K ohms 1/16W
R101	YWR0816R683D	Metal 68K ohms 1/16W
C1	YW5F104Z2VB	Ceramic 0.1 μF
C2	YW5CH101J5VB	Ceramic 100 pF
C3	YWSK1C106KRC	Electrolytic 10 μF 16V
C4-6	YW5F104Z2VB	Ceramic 0.1 μF
C7	ECEV1CV470	Electrolytic 47 μF 16V
C8-10	YW5F104Z2VB	Ceramic 0.1 μF
C11	ECEV1EV330	Electrolytic 33 μF 25V
C12	ECEV1CV470	Electrolytic 47 μF 16V
C16-18	ECEV1HV3R3SR	Electrolytic 3.3 μF 50V
C19	YW5X103K2VB	Ceramic 0.01 μF
C20	YW5X102K5VB	Ceramic 1000 pF
C21,22	ECEV1EV330	Electrolytic 33 μF 25V
C23	ECEV1VG330	Electrolytic 33 μF 35V
C24,25	ECEV1EV330	Electrolytic 33 μF 25V
C26,27	ECEV0JV101	Electrolytic 100 μF 6.3V
C28	ECEV0JV220	Electrolytic 22 μF 6.3V
C29	ECEV0JV101	Electrolytic 100 μF 6.3V
C30	ECEV1CV470	Electrolytic 47 μF 16V
C31	ECEV1CV100	Electrolytic 10 μF 16V
C32	ECEV1CV470	Electrolytic 47 μF 16V
C33	SK21C336KRD0	Electrolytic 33 μF 16V
C34	YW5F104Z2VB	Ceramic 0.1 μF
C40-42	NFM41R10C102	Bead
C43	YW5F104Z2VB	Ceramic 0.1 μF
C44	YWSK1C106KRC	Electrolytic 10 μF 16V
CN2-6	YW51756434	24-pin Connector

REF.NO.	PART NO.	DESCRIPTION
CN11-18	YW51756434	24-pin Connector
CN19-21	YW51756394	24-pin Connector
CN22	YW51756434	24-pin Connector
CN23	YW41756432	12-pin Connector
CN24	YW51756434	24-pin Connector
CN25	YW41756432	12-pin Connector

ACCESSORY PARTS/PACKAGING PARTS

REF.NO.	PART NO.	DESCRIPTION
CN100	YWHR10A7P4S	4-pin Connector
M31	YWV8QA3257AN	Operating Instructions
M32	XZB26X40C05	Polyethylene Bag
M35	YWV9CF2203AN	Packaging Ass'y

EXTENTION BOARD
(REFER TO PAGE 38)

REF.NO.	PART NO.	DESCRIPTION
EXB01	YWV0EA0287AN	12P-24P Extention Board
EXB02	YWV0EA0288AN	24PX2 Extention Board
EXB03	YWV0EA0289AN	24P-X3 Extention Board
EXB04	YWV0EA0290AN	Sensor/drive Extention Board
EXB05	YWV0EA0291AN	Sensor/Pre AMP Extention Board
EXB06	YWV0EA0292AN	Mother/Rear Extention Board
EXB07	YWV0EA0293AN	Encord/Sync Extention Board
EXB08	YWV0EA0294AN	Syscon Extention Board
EXB09	YWV0EA0295AN	Dita Extention Board

CAMERA ADAPTOR WV-PS550

MISCELLANEOUS

REF.NO.	PART NO.	DESCRIPTION
Q101	2SC3944-RS	Transistor
CN101	YWNP5D2V	S-Video Connector
CN102	YWNR	Connector
M1	YWV5WA1593A3	Front Panel
M2	YWV2KA0887A2	Front Chassis
M3	YWV2KA0889B1	Main Chassis
M4	YWV2SA2655A4	Mounting Angle
M5	YWV2KA0859A2	Side Chassis
M6	YWCS1	Cord Clamp
M7	YWV2SA2656A4	Mounting Angle
M8	YWV2PA0619A4	Insulator
M9	YWV5EA1343B2	Upper Cover
M10	YWV5EB1306B2	Bottom Cover
M11	YWV5350WB01	Rubber Foot
M12	YWV5WA1594A2	Rear Panel
M13	YWV2SA2654A4	Mounting Angle
M14	UAMS-05SV0	Cord Clamp
M15	YWV2SA2657A4	Mounting Angle for Left Side
M16	YWV2SA2658A4	Mounting Angle for Right Side
M17	YWV2PA0618A4	Insulator
M18	YWV2SA2653A4	Mounting Angle
M19	YWA1GA0001A4	Plasty-Rivet
M21 ⚠	YWV7QA3239A4	Main Label
M22	YWV7SA1838A4	Screw Caution Label
M25	YWV7MA0338A4	Caution Label
M26	YFV7MB0099A4	UL Caution Label

AUDIO MOTHER BOARD

REF.NO.	PART NO.	DESCRIPTION
PCB1 (RTL)	YWVKBPS55P1A	Printed Circuit Board Assy
CN2	YW41768338	14-pin Connector

AUDIO CONNECTOR BOARD

REF.NO.	PART NO.	DESCRIPTION
PCB2 (RTL)	YWVKCPS55P1A	Printed Circuit Board Assy
SW1	YWSSSF042P6N	Slide Switch
CN2	YW530140310	3-pin Connector
JK3	YWT6525AABB	Jack
M28	YWA2HA0197A4	Shield

AUDIO BOARD

REF.NO.	PART NO.	DESCRIPTION	
PCB3 (RTL)	YWVKDPS55P1A	Printed Circuit Board Assy	
IC1	YWUPC4570G	IC	
IC2	NJM4560M	IC	
IC3	YW78L09UATE1	IC	
IC4	YWTA7303P	IC	
IC5	NJM4556MB	IC	
IC6	NJM2903M	IC	
IC7	YW78L09UATE1	IC	
Q1,2	2SD1819-QRS	Transistor	
Q3-5	2SC3931-CD	Transistor	
Q6	2SB1219-QRS	Transistor	
Q7,8	2SD1819-QRS	Transistor	
Q9	2SC3938-QRS	Transistor	
Q10	2SB1218-QRS	Transistor	
Q12	2SK662-PQR	FET	
Q13	2SD1819-QRS	Transistor	
D1	MA141K	Diode	
D2,3	YWRD2R0ESB1	Diode	
D4	MA338	Diode	
D5	MA182	Diode	
D6,7	MA141K	Diode	
R1	YWR0816P103D	Metal	10K ohms 1/16W
R2	YWR0816P102D	Metal	1K ohms 1/16W
R3	YWR0816P103D	Metal	10K ohms 1/16W
R4	ERJ3GEYJ392	Carbon	3.9K ohms 1/16W
R5	ERJ3GEYJ334	Carbon	330K ohms 1/16W
R6	YWR0816P273D	Metal	27K ohms 1/16W
R7	YF2116751JT	Carbon	750 ohms 1/10W
R8	ERJ3GEYJ471	Carbon	470 ohms 1/16W
R9	ERJ3GEYJ822	Carbon	8.2K ohms 1/16W
R10	ERJ3GEYJ163	Carbon	16K ohms 1/16W
R11	ERJ3GEYJ100	Carbon	10 ohms 1/16W
R12	ERJ6GEY0R00	Carbon	1 ohms 1/10W
R13	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R14	ERJ3GEYJ123	Carbon	12K ohms 1/16W
R15	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R16	YWR0816P113D	Metal	11K ohms 1/16W
R17	YWR0816P133D	Metal	13K ohms 1/16W
R18	ERJ3GEYJ563	Carbon	56K ohms 1/16W
R19	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R20	ERJ3GEYJ333	Carbon	33K ohms 1/16W
R21	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R22	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R23	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R24,25	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R26,27	ERJ3GEYJ333	Carbon	33K ohms 1/16W
R28	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R29	ERJ3GEYJ100	Carbon	10 ohms 1/16W
R30	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R31	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R32	ERJ3GEYJ104	Carbon	100K ohms 1/16W

REF.NO.	PART NO.	DESCRIPTION	
R33,34	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R35	ERJ3GEYJ562	Carbon	5.6K ohms 1/16W
R36	ERJ3GEYJ123	Carbon	12K ohms 1/16W
R37	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R38	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R39	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R40	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R41	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R43	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R44,45	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W
R50	ERJ3GEYJ682	Carbon	6.8K ohms 1/16W
R51,52	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R53	ERJ3GEYJ182	Carbon	1.8K ohms 1/16W
R54	ERJ3GEYJ683	Carbon	68K ohms 1/16W
R55	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R56	ERJ3GEYJ221	Carbon	220 ohms 1/16W
R57	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R58	ERJ3GEYJ683	Carbon	68K ohms 1/16W
R59	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R60	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R61	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R62	ERJ3GEYJ105	Carbon	1M ohms 1/16W
R63	YWR0816P822D	Metal	8.2K ohms 1/16W
R64	ERJ3GEYJ391	Carbon	390 ohms 1/16W
R65	ERJ3GEYJ105	Carbon	1M ohms 1/16W
R66	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R67,68	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R69	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R70-74	ERJ6GEY0R00	Carbon	0 ohms 1/10W
VR1	EVML3GA00B23	Variable Resistor	2 K ohms
C1	ECEA1CKA100	Electrolytic	10 µF 16V
C2	ECEA1AKS470	Electrolytic	47 µF 10V
C3	ECEA1CKN100	Electrolytic	10 µF 16V
C4	ECEA1AKS470	Electrolytic	47 µF 10V
C5	YW5X102K5VB	Ceramic	1000 pF
C6	ECEA1CKN100	Electrolytic	10 µF 16V
C7	YW5CH330J5VB	Ceramic	33 pF
C8	ECEA1CKS470	Electrolytic	47 µF 16V
C9,10	ECEA1CKN100	Electrolytic	10 µF 16V
C11	ECEA1AKA220	Electrolytic	22µF 10V
C12	ECEA1CKS470	Electrolytic	47 µF 16V
C13	YW5X472K5VB	Ceramic	4700 pF
C14,15	YW5CH101J5VB	Ceramic	100 pF
C16	YF400104FZT	Ceramic	0.1 µF
C17	YW5CH120J5VB	Ceramic	12 pF
C18	YW5X102K5VB	Ceramic	1000 pF
C19	YW5CH101J5VB	Ceramic	100 pF
C20	YW400560THJ	Ceramic	56 pF
C21	YF400104FZT	Ceramic	0.1 µF
C22,23	YW5X102K5VB	Ceramic	1000 pF
C24	YF400104FZT	Ceramic	0.1 µF
C25	ECEA1CKS470	Electrolytic	47 µF 16V
C26	ECEA1CKS470	Electrolytic	47 µF 16V
C27,28	YW5CH200J5VB	Ceramic	20 pF
C29	ECEA1CKS470	Electrolytic	47 µF 16V

REF.NO.	PART NO.	DESCRIPTION	
C30	YF400104FZT	Ceramic	0.1 µF
C31	ECEA1CKS470	Electrolytic	47 µF 16V
C32,33	YF400104FZT	Ceramic	0.1 µF
C34	YW5CH050D5VB	Ceramic	5 pF
C35	YW5X682K2VB	Ceramic	6800 pF
C36	YW5X182K2VB	Ceramic	1800 pF
C37	YW5X272K5VB	Ceramic	2700 pF
C38	YF400104FZT	Ceramic	0.1 µF
C39	ECEA1CKS470	Electrolytic	47 µF 16V
C40	ECEA1AKN470	Electrolytic	47 µF 10V
C42	ECEA1AKA220	Electrolytic	22 µF 10V
C43	YW5CH101J5VB	Ceramic	100 pF
C44	YW5CH100J5VB	Ceramic	10 pF
C45	ECEA1AKS470	Electrolytic	47 µF 10V
C46	ECEA1HKA2R2	Electrolytic	2.2 µF 50V
C47	ECEA1HKAR47	Electrolytic	0.47 µF 50V
C48	YW5X103K2VB	Ceramic	0.01 µF
C49	YF400104FZT	Ceramic	0.1 µF
C50	ECSF1VE685	Tantalum	6.8 µF 35V
C51	ECEA1CKS470	Electrolytic	47 µF 16V
C52	YF400104FZT	Ceramic	0.1 µF
C53	ECEA1CKS470	Electrolytic	47 µF 16V
L1	YWS100522391	Coil	390 µH
L2	YWTLC1441Z	Coil	
L3	YWTLC1217Z	Coil	
SW1,2	YWSSSS812B12	Slide Switch	
CF1	YWE112S	Ceramic Filter	
CF2-4	YWE117S	Ceramic Filter	
CN1	YW41756398	14-pin Connector	
TP1-4	YW32BM7R5	Test- Pin	
M31	YWV2HA1118A4	Shield Parts	
M32	YWV2HA1119A4	Shield Parts	
M33	YWV2HA1120A4	Shield Parts	
M34	YWV2HA1121A4	Shield Parts	

INTERFACE BOARD

PCB4 (RTL)	YWVKEPS55P1A	Printed Circuit Board Assy
L1,2	YWBL01RN1A62	Coil
CN1	YWPCRE36MD	36-pin Connector
CN2	YWPCRE28MD	28-pin Connector

LED BOARD

PCB5 (RTL)	YWVKFPS55P1A	Printed Circuit Board Assy
D1	LN277RPX	LED
M36	YWA2NC0257A4	Spacer

MOTHER BOARD

REF.NO.	PART NO.	DESCRIPTION	
PCB6 (RTL)	YWVKYPS55P1A	Printed Circuit Board Assy	
IC1	YWMC145407F	IC	
IC2	NJM2903M	IC	
D1	MA157	Diode	
R1	ERDS2TJ910	Carbon	91 ohms 1/4W
R2	ERJ3GEYJ750	Carbon	75 ohms 1/16W
R3	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R4	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R5	ERJ3GEYJ682	Carbon	6.8K ohms 1/16W
R6	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R7	ERJ3GEYJ101	Carbon	100 ohms 1/16W
C1	ECA1EFZ181	Electrolytic	180 µF 25V
C2	ECEA1CKS470	Electrolytic	47 µF 16V
C3-6	ECEA1CKA100	Electrolytic	10 µF 16V
C8	ECEA1CKA220	Electrolytic	22 µF 16V
C9	YW5F104Z2VB	Ceramic	0.1 µF
CN1	YW530141410	14-pin Connector	
CN2,3	FCN214J050GA	50-pin Connector	
CN4,5	YW530140410	4-pin Connector	
CN6	YW530140810	8-pin Connector	
CN7	YW530140310	3-pin Connector	
CN8	YW530140810	8-pin Connector	
F1	YWSSFR4AF002	Current Fuse	0.4A

DEMODULATOR BOARD

REF.NO.	PART NO.	DESCRIPTION	
PCB7 (RTL)	YWVKZADP7E2A	Printed Circuit Board Assy	
IC1	NJM592M8	IC	
IC2	TL092CPS	IC	
IC3	YWLM1881M	IC	
IC4	YWCX20095A	IC	
IC5	NJM592M8	IC	
IC6	NJM4556M	IC	
IC7	TL092CPS	IC	
IC8	NJM2903M	IC	
IC9	UPD74HC4050G	IC	
IC10	YWTC4S66FR	IC	
IC11	YWUPD4538BG	IC	
IC12	YWUPD4053BG	IC	
IC13	YWUPC4062G2	IC	
IC14	YWUPD4053BG	IC	
IC15	YWTC4S69F	IC	
IC16	YWTC4S66FR	IC	
Q1	2SC2404-CD	Transistor	
Q2	2SK198-Q	Transistor	
Q3-5	2SC2404-CD	Transistor	
Q6,7	2SA1022-C	Transistor	
Q8,9	2SD601-RS	Transistor	
Q10	2SA1022-C	Transistor	
Q11	2SC2404-CD	Transistor	
Q12	2SD601-RS	Transistor	
Q13	2SC2404-CD	Transistor	
Q14-16	2SD601-RS	Transistor	
Q17	2SB709-RS	Transistor	
Q18-21	2SC2404-CD	Transistor	
Q23,24	2SC2404-CD	Transistor	
Q25	2SK198-Q	Transistor	
Q26-28	2SC2404-CD	Transistor	
Q29,30	2SA1022-C	Transistor	
Q31	2SC2404-CD	Transistor	
Q32	2SD601-RS	Transistor	
Q33	2SA1022-C	Transistor	
Q34,35	2SD601-RS	Transistor	
Q36	2SC2404-CD	Transistor	
Q37,38	2SD601-RS	Transistor	
Q39	2SK198-Q	Transistor	
Q40	2SB793-RS	Transistor	
Q41	2SD601-RS	Transistor	
Q42	2SB793-RS	Transistor	
Q43-45	2SD601-RS	Transistor	
Q46	2SB793-RS	Transistor	
Q47	2SD601-RS	Transistor	
Q48	2SB793-RS	Transistor	
D1	MA165	Diode	
D2	MA151K	Diode	
R1	YF2116333GT	Carbon	33K ohms 1/10W
R2	YF2116683GT	Carbon	68K ohms 1/10W
R3	YF2116681JT	Carbon	680 ohms 1/10W
R4	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R5	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R6	YF2116560JT	Carbon	56 ohms 1/10W
R7	YF2116153JT	Carbon	15K ohms 1/10W
R8	YF2116123JT	Carbon	12K ohms 1/10W
R9	YF2116470JT	Carbon	47 ohms 1/10W
R10	YF2116470JT	Carbon	47 ohms 1/10W
R11	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R12	YF2116102JT	Carbon	1K ohms 1/10W
R13	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R14	YF2116333GT	Carbon	33K ohms 1/10W
R15	YF2116473GT	Carbon	47K ohms 1/10W
R16	YF2116203JT	Carbon	20K ohms 1/10W
R17	YF2116101JT	Carbon	100 ohms 1/10W
R18	ERJ6GEYJ393	Carbon	39K ohms 1/10W
R19	YF2116683GT	Carbon	68K ohms 1/10W
R20	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R21	YF2116821GT	Carbon	820 ohms 1/10W
R22	YF2116331JT	Carbon	330 ohms 1/10W
R23	YF2116821GT	Carbon	820 ohms 1/10W
R24	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R25	YF2116391JT	Carbon	390 ohms 1/10W
R26	YF2116332JT	Carbon	3.3K ohms 1/10W

REF.NO.	PART NO.	DESCRIPTION	
R27	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R28,29	YF2116682JT	Carbon	6.8K ohms 1/10W
R30	YF2116473GT	Carbon	47K ohms 1/10W
R31	YF2116332JT	Carbon	3.3K ohms 1/10W
R32	YF2116101JT	Carbon	100 ohms 1/10W
R33	YF2116332JT	Carbon	3.3K ohms 1/10W
R34,35	YF2116331JT	Carbon	330 ohms 1/10W
R38	YF2116273GT	Carbon	27K ohms 1/10W
R39	YF2116683GT	Carbon	68K ohms 1/10W
R40	YF2116822JT	Carbon	8.2K ohms 1/10W
R41	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R42	YF2116152JT	Carbon	1.5K ohms 1/10W
R43,44	YF2116101JT	Carbon	100 ohms 1/10W
R45	YF2116181JT	Carbon	180 ohms 1/10W
R46	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R47	YF2116122JT	Carbon	1.2K ohms 1/10W
R48	YF2116152JT	Carbon	1.5K ohms 1/10W
R49	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R50,51	YF2116152JT	Carbon	1.5K ohms 1/10W
R52-55	YF2116332JT	Carbon	3.3K ohms 1/10W
R66	YF2116473GT	Carbon	47K ohms 1/10W
R67	YF2116152JT	Carbon	1.5K ohms 1/10W
R68	YF2116272JT	Carbon	2.7K ohms 1/10W
R69	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R70	YF2116681JT	Carbon	680 ohms 1/10W
R71	YF2116684JT	Carbon	680K ohms 1/10W
R72,73	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R74,75	YF2116682JT	Carbon	6.8K ohms 1/10W
R76	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R77	YF2116152JT	Carbon	1.5K ohms 1/10W
R78	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R79	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R80	YF2116332JT	Carbon	3.3K ohms 1/10W
R81	YF2116101JT	Carbon	100 ohms 1/10W
R82,83	YF2116332JT	Carbon	3.3K ohms 1/10W
R86	YF2116563JT	Carbon	56K ohms 1/10W
R87	YF2116333GT	Carbon	33K ohms 1/10W
R88	YF2116332JT	Carbon	3.3K ohms 1/10W
R89,90	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R91	YF2116471JT	Carbon	470 ohms 1/10W
R92	YF2116333GT	Carbon	33K ohms 1/10W
R93	YF2116473GT	Carbon	47K ohms 1/10W
R94	YF2116202JT	Carbon	2K ohms 1/10W
R95	YF2116510JT	Carbon	51 ohms 1/10W
R96	YF2116153JT	Carbon	15K ohms 1/10W
R97	YF2116682JT	Carbon	6.8K ohms 1/10W
R98,99	YF2116470JT	Carbon	47 ohms 1/10W
R100	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R101	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R102	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R103	YF2116563GT	Carbon	56K ohms 1/10W
R104	YF2116331JT	Carbon	330 ohms 1/10W
R105	YF2116333GT	Carbon	33K ohms 1/10W
R106	ERJ6GEYJ393	Carbon	39K ohms 1/10W
R107,108	YF2116683GT	Carbon	68K ohms 1/10W

REF.NO.	PART NO.	DESCRIPTION	
R109	YF2116821GT	Carbon	820 ohms 1/10W
R110,111	YF2116101JT	Carbon	100 ohms 1/10W
R112	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R113	YF2116911JT	Carbon	910 ohms 1/10W
R114	YW2116242JT	Carbon	2.4K ohms 1/10W
R115	YF2116101JT	Carbon	100 ohms 1/10W
R116	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R117	YF2116101JT	Carbon	100 ohms 1/10W
R118	YF2116391JT	Carbon	390 ohms 1/10W
R119	YF2116332JT	Carbon	3.3K ohms 1/10W
R120	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R121	YF2116682JT	Carbon	6.8K ohms 1/10W
R122	YF2116473GT	Carbon	47K ohms 1/10W
R123	YF2116682JT	Carbon	6.8K ohms 1/10W
R124	YF2116332JT	Carbon	3.3K ohms 1/10W
R125	YF2116101JT	Carbon	100 ohms 1/10W
R126	YF2116332JT	Carbon	3.3K ohms 1/10W
R127,128	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R129	YF2116822JT	Carbon	8.2K ohms 1/10W
R130	YF2116202JT	Carbon	2K ohms 1/10W
R131	YF2116101JT	Carbon	100 ohms 1/10W
R132	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R133	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R134	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R135,136	YF2116332JT	Carbon	3.3K ohms 1/10W
R137	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R138	YF2116332JT	Carbon	3.3K ohms 1/10W
R139	YF2116152JT	Carbon	1.5K ohms 1/10W
R140	YF2116183GT	Carbon	18K ohms 1/10W
R141	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R142,143	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R144	YF2116162JT	Carbon	1.6K ohms 1/10W
R145	YF2116563JT	Carbon	56K ohms 1/10W
R146	YW2116182JT	Carbon	1.8K ohms 1/10W
R147	YF2116514GT	Carbon	510K ohms 1/10W
R148	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R149	YF2116272JT	Carbon	2.7K ohms 1/10W
R150	YF2116474JT	Carbon	470K ohms 1/10W
R151	YF2116112JT	Carbon	1.1K ohms 1/10W
R152,153	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R155	YF2116222GT	Carbon	2.2K ohms 1/10W
R156	YF2116563JT	Carbon	56K ohms 1/10W
R157	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R158	YF2116474JT	Carbon	470K ohms 1/10W
R159	YWR1220P473D	Metal	47K ohms
R160	YWR1220P153D	Metal	15K ohms
R161	R1220P133D	Metal	13K ohms
R162	YWR1220P393D	Metal	39K ohms
R163	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R164	YF2116331JT	Carbon	330 ohms 1/10W
R165	YWR1220P153D	Metal	15K ohms
R166	YWR1220P473D	Metal	47K ohms
R167	R1220P133D	Metal	13K ohms
R168	YWR1220P393D	Metal	39K ohms
R169	ERJ6GEYJ102	Carbon	1K ohms 1/10W

REF.NO.	PART NO.	DESCRIPTION	
R170	YF2116331JT	Carbon	330 ohms 1/10W
R172	YF2116330JT	Carbon	33 ohms 1/10W
R173,174	YF2116332JT	Carbon	3.3K ohms 1/10W
R175,176	YF2116682JT	Carbon	6.8K ohms 1/10W
R177,178	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R179	YF2116222GT	Carbon	2.2K ohms 1/10W
R180	YF2116332JT	Carbon	3.3K ohms 1/10W
R181,182	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R183	YF2116222GT	Carbon	2.2K ohms 1/10W
R184	YF2116272JT	Carbon	2.7K ohms 1/10W
R185	YF2116302GT	Carbon	3K ohms 1/10W
R186	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R187	YF2116682JT	Carbon	6.8K ohms 1/10W
R188	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R189	YF2116561JT	Carbon	560 ohms 1/10W
R190	ERJ6GEYJ102	Carbon	1K ohms 1/10W
VR1	EVML3GA00B23	Variable Resistor	2K ohms
VR2	EVML3GA00B13	Variable Resistor	1K ohms
VR3,4	EVML3GA00B53	Variable Resistor	5KB ohms
C1	ECEA1CU101	Electrolytic	100 μF 16V
C2	YF400120CHJT	Ceramic	12 pF
C3	YF400104FZT	Ceramic	0.1 μF
C4	ECEA1AU470	Electrolytic	47 μF 10V
C5	ECSF1CE476	Tantalum	47 μF 16V
C6	ECEA1HU0R1	Electrolytic	0.1 μF 50V
C7	YF400104FZT	Ceramic	0.1 μF
C8,9	ECEA1AU470	Electrolytic	47 μF 10V
C10	ECSF1CE476	Tantalum	47μF 16V
C11	YF400101CHJT	Ceramic	100 pF
C12	ECEA1AU101	Electrolytic	100 μF 10V
C13	ECEA1HU010	Electrolytic	1 μF 50V
C14	YF400050CHDT	Ceramic	5 pF
C15	YF400270CHJT	Ceramic	27 pF
C18	ECSF1CE476	Tantalum	47 μF 16V
C19	ECEA1AKN470	Electrolytic	47 μF 10V
C20	YF400220CHJT	Ceramic	22 pF
C21	ECEA1AU470	Electrolytic	47 μF 10V
C22	ECEA1CU101	Electrolytic	100 μF 16V
C23	YF400104FZT	Ceramic	0.1 μF
C24	ECEA1AU330	Electrolytic	33 μF 10V
C25	ECEA1CKA100	Electrolytic	10 μF 16V
C26	ECEA1HK010	Electrolytic	1 μF 50V
C27	YF400104FZT	Ceramic	0.1 μF
C28	ECEA1HU010	Electrolytic	1 μF 50V
C29	ECEA1CU470	Electrolytic	47 μF 16V
C30	YF400151CHJT	Ceramic	150 pF
C31	YF400104FZT	Ceramic	0.1 μF
C32	ECEA1CU100	Electrolytic	10 μF 16V
C33,34	YF400104FZT	Ceramic	0.1 μF
C35	ECEA1CU470	Electrolytic	47 μF 16V
C36	ECEA0JKN470	Electrolytic	47 μF 6.3V
C37	YF400221CHJT	Ceramic	220 pF
C38	ECEA0JKN330	Electrolytic	33 μF 6.3V
C39	ECSF1AE476	Tantalum	47 μF 10V or
	YWS21A476	Electrolytic	47 μF 10V
C40	ECEA1AU101	Electrolytic	100 μF 10V

REF.NO.	PART NO.	DESCRIPTION	
C41	ECEA1EU4R7	Electrolytic	4.7 μF 25V
C42	YWRJ410V222M	Electrolytic	2200 μF 10V
C43	ECEA1EKA4R7	Electrolytic	4.7 μF 25V
C46	ECEA1CU101	Electrolytic	100 μF 16V
C47	YF400100CHJT	Ceramic	10 pF
C50,51	YF400104FZT	Ceramic	0.1 μF
C52	ECSF1AE476	Tantalum	47 μF 10V or
	YWS21A476	Electrolytic	47 μF 10V
C53	ECSF1CE476	Tantalum	47μF 16V
C54	ECSF1AE336	Tantalum	33 μF 10V
C55	YF400104FZT	Ceramic	0.1 μF
C56	ECEA1AU470	Electrolytic	47 μF 10V
C57	ECEA1CU470	Electrolytic	47μF 16V
C58	YF400101CHJT	Ceramic	100 pF
C59	ECEA1AU470	Electrolytic	47 μF 10V
C60	ECEA1AU101	Electrolytic	100 μF 10V
C61	ECEA1HU010	Electrolytic	1 μF 50V
C62,63	YF400050CHDT	Ceramic	5 pF
C65	ECSF1CE476	Tantalum	47 μF 16V
C66	ECSF1AE476	Tantalum	47 μF 10V or
	YWS21A476	Electrolytic	47 μF 10V
C67	ECEA1CU101	Electrolytic	100 μF 16V
C68	ECEA1AU470	Electrolytic	47 μF 10V
C69	ECEA1CU100	Electrolytic	10 μF 16V
C70	ECSF1CE106	Tantalum	10 μF 16V
C71	ECQM1H104JZ	Plastic	0.1 μF 50V
C72	ECSF1AE225	Tantalum	2.2 μF 10V
C73	ECSF1CE476	Tantalum	47 μF 16V
C74	YF400104FZT	Ceramic	0.1 μF
C75	ECEA1VSN2R2	Electrolytic	2.2 μF 35V
C76	YF400104FZT	Ceramic	0.1 μF
C77	ECSF1CE106	Tantalum	10 μF 16V
C78	ECSF1CE476	Tantalum	47 μF 16V
C79	YF400103XKT	Ceramic	0.01 μF
C80	ECEA1AU470	Electrolytic	47 μF 10V
C81	ECSF1CE476	Tantalum	47 μF 16V
C82	ECSF1AE476	Tantalum	47 μF 10V or
	YWS21A476	Electrolytic	47 μF 10V
C83	YF400101CHJT	Ceramic	100 pF
C84	YF400104FZT	Ceramic	0.1 μF
C85	ECEA1CKA100	Electrolytic	10 μF 16V
C86	ECEA1CU101	Electrolytic	100 μF 16V
C87	ECEA1AKA220	Electrolytic	22 μF 10V
C88	ECEA1AU101	Electrolytic	100 μF 10V
C89	YF400224FZT	Ceramic	0.22 μF
C90	ECEA0JU101	Electrolytic	100 μF 6.3V
C91	YF400103XKT	Ceramic	0.01 μF
CT1	YWCDY40AS	Trimmer Capacitor	
CT2	YWCDX20APS	Trimmer Capacitor	
L7,8	ELJFA470KF	Coil	47 μH
L18,19	ELJFA100KF	Coil	10 μH
CF1	ELB4B538	Filter	
CF2	ELKTH101GA	Filter	
CF3,4	YWT7K26MBPF	Filter	

REF.NO.	PART NO.	DESCRIPTION
CF5,6	YWYS30545	Filter
CF7	YWYS30549	Filter
CF8	YWYS30546	Filter
CN1	FCN215Q050GA	50-pin Connector
TP1-10	YW32BM5A	Test- Pin
M38	YWV2HA0977A3	Shield Cover
M39	YWV2HA0978C2	Shield Case

MODULATOR BOARD

REF.NO.	PART NO.	DESCRIPTION
PCB8 (RTL)	YWVKZAD7AE3A	Printed Circuit Board Assy
IC1	YWUPC4062G2	IC
IC2	YWLM1881M	IC
IC3	YWTC4S69F	IC
IC4	YWTC4S66FR	IC
IC5	TLC272CPS	IC
IC6	YWSN16913P	IC
IC7	YWTC4S66FR	IC
IC8	YWTC7S08F	IC
IC9	UPD74HC390G	IC
IC10	YWUPD4538BG	IC
IC11	YWUPD74HC08G	IC
IC12	NJM1496M	IC
IC13,14	UPD74HC221AG	IC
Q1-3	2SC2404-CD	Transistor
Q4	2SD601-RS	Transistor
Q5-9	2SC2404-CD	Transistor
Q10	2SA1022-CD	Transistor
Q11,12	2SC2404-CD	Transistor
Q13	2SA1022-CD	Transistor
Q14	2SB793-RS	Transistor
Q15,16	2SD601-RS	Transistor
Q17,18	2SB793-RS	Transistor
Q19,20	2SD601-RS	Transistor
Q21	2SA1022-CD	Transistor
Q22,23	2SC2404-CD	Transistor
Q24	2SB793-RS	Transistor
Q25	2SD601-RS	Transistor
Q26	2SB793-RS	Transistor
Q27,28	2SD601-RS	Transistor
Q29	2SB709-RS	Transistor
Q30	2SD601-RS	Transistor
D1	MA151WA	Diode
R2	YF2116113JT	Carbon 11K ohms 1/10W
R3	YF2116822JT	Carbon 8.2K ohms 1/10W
R4	YF2116152JT	Carbon 1.5K ohms 1/10W
R5	YF2116511JT	Carbon 510 ohms 1/10W
R6	YF2116431JT	Carbon 430 ohms 1/10W
R7	YW2116242JT	Carbon 2.4K ohms 1/10W
R8	YF2116682JT	Carbon 6.8K ohms 1/10W

REF.NO.	PART NO.	DESCRIPTION
R9	YF2116101JT	Carbon 100 ohms 1/10W
R10	ERJ6GEYJ102	Carbon 1K ohms 1/10W
R11	YF2116331JT	Carbon 330 ohms 1/10W
R12	YW2116182JT	Carbon 1.8K ohms 1/10W
R13	YF2116331JT	Carbon 330 ohms 1/10W
R14	YF2116473GT	Carbon 47K ohms 1/10W
R15	YF2116823JT	Carbon 82K ohms 1/10W
R16	YF2116561JT	Carbon 560 ohms 1/10W
R17,18	YF2116221JT	Carbon 220 ohms 1/10W
R19	YW2116182JT	Carbon 1.8K ohms 1/10W
R20,21	YF2116101JT	Carbon 100 ohms 1/10W
R22	ERJ6GEYJ562	Carbon 5.6K ohms 1/10W
R23	YF2116302GT	Carbon 3K ohms 1/10W
R24	YF2116511JT	Carbon 510 ohms 1/10W
R25	YF2116152JT	Carbon 1.5K ohms 1/10W
R26,27	YF2116101JT	Carbon 100 ohms 1/10W
R28	ERDS2TJ301	Carbon 300 ohms 1/4W
R29,30	YF2116272JT	Carbon 2.7K ohms 1/10W
R31,32	YF21162R2JT	Carbon 2.2 ohms 1/10W
R33	ERJ6GEYJ103	Carbon 10K ohms 1/10W
R34	ERDS2TJ750	Carbon 75 ohms 1/4W
R35	YF2116331JT	Carbon 330 ohms 1/10W
R36	ERJ6GEYJ102	Carbon 1K ohms 1/10W
R37	YWR1220P393D	Metal 39K ohms
R38	R1220P133D	Metal 13K ohms
R39	YWR1220P153D	Metal 15K ohms
R40	YWR1220P473D	Metal 47K ohms
R43	YF2116272JT	Carbon 2.7K ohms 1/10W
R44	YF2116684JT	Carbon 680K ohms 1/10W
R45-48	ERJ6GEYJ103	Carbon 10K ohms 1/10W
R49,50	ERJ6GEYJ223	Carbon 22K ohms 1/10W
R51	ERJ6GEYJ103	Carbon 10K ohms 1/10W
R52	ERJ6GEYJ562	Carbon 5.6K ohms 1/10W
R53	ERJ6GEYJ103	Carbon 10K ohms 1/10W
R54	YF2116224JT	Carbon 220K ohms 1/10W
R55	YWR1220P362D	Metal 3.6K ohms
R56	YFR1220P104D	Metal 100K ohms
R57	YWR1220P223D	Metal 22K ohms
R58	ERJ6GEYJ562	Carbon 5.6K ohms 1/10W
R59	YF2116220JT	Carbon 22 ohms 1/10W
R60	YF2116202JT	Carbon 2K ohms 1/10W
R61	YW2116182JT	Carbon 1.8K ohms 1/10W
R62	YF2116331JT	Carbon 330 ohms 1/10W
R63	ERJ6GEYJ102	Carbon 1K ohms 1/10W
R64	YWR1220P393D	Metal 39K ohms
R65	YWR1220P183D	Metal 18K ohms
R66	YWR1220P153D	Metal 15K ohms
R67	YWR1220P473D	Metal 47K ohms
R68	YF2116153JT	Carbon 15K ohms 1/10W
R69,70	YF2116222GT	Carbon 2.2K ohms 1/10W
R71	YF2116752JT	Carbon 7.5K ohms 1/10W
R72	ERJ6GEYJ472	Carbon 4.7K ohms 1/16W
R73,74	ERJ6GEYJ102	Carbon 1K ohms 1/10W
R75,76	ERJ6GEYJ472	Carbon 4.7K ohms 1/16W
R77	ERJ6GEYJ102	Carbon 1K ohms 1/10W

REF.NO.	PART NO.	DESCRIPTION	
R78	YF2116821GT	Carbon	820 ohms 1/10W
R79	YF2116122JT	Carbon	1.2K ohms 1/10W
R80	YF2116471JT	Carbon	470 ohms 1/10W
R81	YF2116750JT	Carbon	75 ohms 1/10W
R82	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R83,84	YF2116332JT	Carbon	3.3K ohms 1/10W
R85	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R86	YF2116471JT	Carbon	470 ohms 1/10W
R87	YF2116332JT	Carbon	3.3K ohms 1/10W
R88,89	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R90,91	YF2116683GT	Carbon	68K ohms 1/10W
R92	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R93	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R94-97	YF2116222GT	Carbon	2.2K ohms 1/10W
R98,99	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R100	YF2116222GT	Carbon	2.2K ohms 1/10W
R101	YF2116332JT	Carbon	3.3K ohms 1/10W
R102	YF2116222GT	Carbon	2.2K ohms 1/10W
R103	YF2116272JT	Carbon	2.7K ohms 1/10W
R104,105	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R106	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R107	YF2116332JT	Carbon	3.3K ohms 1/10W
R108	ERJ6GEYJ562	Carbon	5.6K ohms 1/10W
R109,110	YF2116222GT	Carbon	2.2K ohms 1/10W
R111,112	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R113	YF2116682JT	Carbon	6.8K ohms 1/10W
R114	YF2116202JT	Carbon	2K ohms 1/10W
R191	YF2116122JT	Carbon	1.2K ohms 1/10W
VR1	EVML3GA00B23	Variable Resistor	2K ohms
VR2	EVML3GA00B13	Variable Resistor	1K ohms
VR3	EVML3GA00B23	Variable Resistor	2K ohms
VR4	EVML3GA00B14	Variable Resistor	10K ohms
VR5,6	EVML3GA00B13	Variable Resistor	1K ohms
VR7,8	EVML3GA00B24	Variable Resistor	20K ohms
VR9	EVML3GA00B54	Variable Resistor	50K ohms
VR10,11	EVML3GA00B24	Variable Resistor	20K ohms
C1	ECEA1AKG101	Electrolytic	100 μF 10V
C2	ECEA1AKS470	Electrolytic	47 μF 10V
C3	YF400180CHJT	Ceramic	18 pF
C4,5	ECEA1AKS470	Electrolytic	47 μF 10V
C6	ECEA1AKG101	Electrolytic	100 μF 10V
C7	ECSF1CE476	Tantalum	47 μF 16V
C8	YWRJ410V471M	Electrolytic	470 μF 10V
C9	ECEA1AKN470	Electrolytic	47μF 10V
C10	ECSF1CE476	Tantalum	47 μF 16V
C11	ECSF1EE476	Tantalum	47 μF 25V
C12	YWRJ410V222M	Electrolytic	2200 μF 10V
C13	ECSF1CE476	Tantalum	47 μF 16V
C14	ECEA1AKG101	Electrolytic	100 μF 10V
C15	ECEA0JKA220	Electrolytic	22 μF 6.3V
C16,17	ECEA1AKG101	Electrolytic	100 μF 10V
C18	ECSF1AE476	Tantalum	47 μF 10V
C19	YF400102XKT	Ceramic	1000 pF
C20	YF400104FZT	Ceramic	0.1 μF
C21	YF400224FZT	Ceramic	0.22 μF
C22	YF400104FZT	Ceramic	0.1 μF

REF.NO.	PART NO.	DESCRIPTION	
C24	ECEA1AKA220	Electrolytic	22 μF 10V
C25	YF400102XKT	Ceramic	1000 pF
C26	ECEA0JKA221	Electrolytic	220 μF 6.3V
C27	YF400103XKT	Ceramic	0.01 μF
C28	YF400102XKT	Ceramic	1000 pF
C29	ECSF1VE105	Tantalum	1 μF 35V
C30,31	ECEA1AKG101	Electrolytic	100 μF 10V
C32	YF400223XKT	Ceramic	0.022 μF
C33	ECEA1AKS470	Electrolytic	47 μF 10V
C34	YF400104FZT	Ceramic	0.1 μF
C35,36	YW400560UJJT	Ceramic	56 pF
C37	ECEA1AKG101	Electrolytic	100 μF 10V
C38	ECEA0JKA220	Electrolytic	22 μF 6.3V
C39	ECEA1AKG101	Electrolytic	100μF 10V
C40	ECEA0JKN470	Electrolytic	47 μF 6.3V
C41	ECEA1AKG101	Electrolytic	100 μF 10V
C42	ECQB1H103JF	Plastic	0.01 μF 50V
C43	ECSF1AE476	Tantalum	47 μF 10V
C44	ECEA1AKG101	Electrolytic	100 μF 10V
C45	ECSF1CE476	Tantalum	47 μF 16V
C46	ECEA1AKS470	Electrolytic	47 μF 10V
C47	ECEA1AKN470	Electrolytic	47 μF 10V
C48	ECEA0JKA221	Electrolytic	220 μF 6.3V
C49	YF400103XKT	Ceramic	0.01 μF
C50	YW400080CHD	Ceramic	8 pF
C51	YF400121CHJT	Ceramic	120 pF
C52	YW400090CHDT	Ceramic	9 pF
C53,54	YF400121CHJT	Ceramic	120 pF
C55	YW400080CHD	Ceramic	8 pF
C56	YF400121CHJT	Ceramic	120 pF
C57	YW400090CHDT	Ceramic	9 pF
C58,59	YF400121CHJT	Ceramic	120 pF
C60	YF400103XKT	Ceramic	0.01 μF
C61	ECEA1AKG101	Electrolytic	100 μF 10V
C62,63	ECQB1H103JF	Plastic	0.01 μF 50V
C64	ECSF1AE476	Tantalum	47 μF 10V
C65	ECQP1102GZ	Plastic	1000 pF 100V
C66	ECSF1AE476	Tantalum	47 μF 10V
C67,68	ECQB1H103JF	Plastic	0.01 μF 50V
C69	YF400121CHJT	Ceramic	120 pF
C70	YW400090CHDT	Ceramic	9 pF
C71	YF400121CHJT	Ceramic	120 pF
C72	YW400080CHD	Ceramic	8 pF
C73	YF400121CHJT	Ceramic	120 pF
C74	YF400103XKT	Ceramic	0.01 μF
C75	ECSF0JE476	Tantalum	47 Fμ 6.3V
C76	ECEA1CKN100	Electrolytic	10 μF 16V
L4	ELJFA150KF	Coil	15 μH
L5	EL05SI390K	Coil	39 μH
L6	ELJFA270KF	Coil	27 μH
L13	EIL7EN010Q	Coil	
L14	EIL7EN011Q	Coil	
L15	EIL7EN012Q	Coil	
L16	EIL7EN010Q	Coil	
L17	EIL7EN011Q	Coil	

REF.NO.	PART NO.	DESCRIPTION	
L18,19	EIL7EN012Q	Coil	
L20	EIL7EN011Q	Coil	
L21	EIL7EN010Q	Coil	
X1	YWM2D17M734	Crystal Oscillator	
CF1	YWT5V8MLPF	Filter	
CF2,3	YWT5V0R5MLPF	Filter	
CN1	FCN215Q050GA	Connector	
J1,4	ERJ6GEY0R00	Carbon	0 ohms 1/10W
J6	ERJ6GEY0R00	Carbon	0 ohms 1/10W
TP1-10	YW32BM5A	Test-Pin	
M41	YWV2HA0979A2	Shield Case	
M42	YWV2HB0977A3	Shield Cover	

POWER BOARD

REF.NO.	PART NO.	DESCRIPTION	
PCB9 (RTL)	YWVKZPS70P1A	Printed Circuit Board Assy	
IC1	YW78L05UATE2	IC	
IC2	YWTC7SU04F	IC	
IC3	YWTC7S04F	IC	
IC4	YWTC4S66FR	IC	
IC5	TL062CPS	IC	
Q3,4	2SD814-QRS	Transistor	
Q5,6	2SB792A-RS	Transistor	
Q7	2SD814-QRS	Transistor	
Q8	2SJ122	Transistor	
D1	MA1062-M	Diode	
D2	MA151K	Diode	
D3-5	MA182	Diode	
D6	YWERC9102	Diode	
D7-9	MA182	Diode	
D10	YFRD22EB2	Diode	
D11	MA1051-M	Diode	
D12	MA1056H	Diode	
D13	MA182	Diode	
D14	YWRD27EB4	Diode	
D15,16	YFRD22EB2	Diode	
D17,18	V03G	Diode	
R1	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R2	ERG2CJ223	Metal	22K ohms 2W
R4	YW2116182JT	Carbon	1.8K ohms 1/10W
R5,6	ERDS1TJ301	Carbon	300 ohms 1/2W
R8	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R9	ERF2AK1R0	Wire Wound	2 ohms 2W
R10	ER050CKF5602	Metal	56K ohms 1/2W
R11	YW2116182JT	Carbon	1.8K ohms 1/10W
R12	ERDS1TJ303	Carbon	30K ohms 1W
R13	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R14	YF2116302GT	Carbon	3K ohms 1/10W
R15	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R16	ERDS1TJ270	Carbon	27 ohms 1W
R17	YF2116474JT	Carbon	470K ohms 1/10W
R18	YF2116272JT	Carbon	2.7K ohms 1/10W
R19,20	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R21	ERDS2TJ562	Carbon	5.6K ohms 1/4W
R22	YF2116823JT	Carbon	82K ohms 1/10W
R23	YF2116391JT	Carbon	390 ohms 1/10W
R24	ERG2CJ223	Metal	22K ohms 2W
R25	ERDS2TJ243	Carbon	24K ohms 1/4W
R26,29	ERDS1TJ473	Carbon	47K ohms 1/2W
R30	ERDS2TJ683	Carbon	68K ohms 1/4W
R31	ERDS2TJ103	Carbon	10K ohms 1/4W
R32	YF2116684JT	Carbon	680K ohms 1/10W
R34	ERDS2TJ102	Carbon	1K ohms 1/4W
R35	YF2116391JT	Carbon	390 ohms 1/10W
R36	YF2116202JT	Carbon	2K ohms 1/10W
R37	ERF2AKR68	Wire Wound	0.68 ohms 2W
R39,40	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R41	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R42	YF2116124GT	Carbon	120K ohms 1/1QW
R43	YF2116134GT	Carbon	130K ohms 1/10W
VR1	EVML3GA00B24	Variable Resistor	20K ohms
C1,2	YWLPH2C471S1	Electrolytic	470 µF 100V
C3	ECQM2104KZ	Plastic	0.1 µF
C5	YWRJ3160V220	Electrolytic	22 µF 16V
C7	YWRJ310V102M	Electrolytic	1000 µF 10V
C8	YWRJ3160V101	Electrolytic	100 µF 16V
C10	ECQM1103KZ	Plastic	0.01 µF 100V
C11,12	YF400200CHJT	Ceramic	20 pF
C13	YF400104FZT	Ceramic	0.1 µF
C14	ECQM1104KZ	Plastic	0.1 µF 100V
C15	YWRJ316V100M	Electrolytic	10 µF 16V
C16	YF400223XKT	Ceramic	0.022 µF
C17	YWRJ3160V220	Electrolytic	22 µF 16V
C18	YWRJ363V100M	Electrolytic	10 µF 63V
C19	YWRJ325V100M	Electrolytic	10 µF 25V
C20	YF400103XKT	Ceramic	0.01 µF
C21	YWRJ3160V101	Electrolytic	100 µF 16V
C22,23	YWRJ316V101M	Electrolytic	100 µF 16V
L1,2	ELC18E005	Coil	160 µH
L3	YWS100522272	Coil	2.7 µH
X1	YWSC16MHZ	Crystal Oscillator	16 MH2
CN1	YW530140410	4-pin Connector	
CN2	YW530140310	3-pin Connector	
CN3	YW53014-0210	2-pin Connector	
CN4	YW530140310	3-pin Connector	
J38	ERDS2TC0	Jumper Resistor	
TP1,2	YW32BM7R5	Test- Pin	

POWER SUPPLY BOARD

REF.NO.	PART NO.	DESCRIPTION	
PCB10 (RTL)	YWSVBP50SX-B	Printed Circuit Board Assy	
IC1	YWEH-12A	IC	
IC2	AN1431T	IC	
Q1	2SK1386	FET	
PC1,2	YWPS25011	Photo Coupler	
D1	YWD3SBA60	Diode	
D4	YWERB38-05	Diode	
D5,6	YWUF4005	Diode	
D7	MA645	Diode	
D9	YWRD15EB3	Diode	
R1	YW5D-13	Thermistor	
R2	ERG1SJ823	Metal	82K ohms 1W
R3	ERX3SJ7R5	Metal	7.5 ohms 3W
R4	ERG1ANJ471	Metal	470 ohms 1W
R6	YWRNF1S102J	Fuse Resistor	1K ohms 1W
R7	YWRNF1S220J	Fuse Resistor	22 ohms 1W
R8	ERG1SJ683	Metal	68K ohms 1W
R9	ERX2SJR22	Metal	0.22 ohms 2W
R10	ERQ12AJ101P	Fuse Resistor	100 ohms
R17	ER0S2CKF3002	Metal	30K ohms 2W
R18	ER0S2CKF6491	Metal	6.49K ohms 2W
R19	ERD25FJ223	Carbon	22K ohms 1/4W
R21	ERD25FJ201	Carbon	200 ohms 1/4W
R22	ERD25FJ182	Carbon	1.8K ohms 1/4W
R23	ERD25FJ361	Carbon	360 ohms 1/4W
R24	ERD25FJ333	Carbon	33K ohms 1/4W
VR1	EVM31GA00B53	Variable Resistor	5K ohms
C1	ECQ112A104MN	Film	0.1 μF
C2,3	ECKDNS222ME	Ceramic	2200 pF
C4	ECKD3D221KBN	Ceramic	220 pF
C5	ECQE2104KF	Film	0.1 μF
C6	ECQ112A333MN	Film	0.033 μF
C7-9	ECQE6103KZ	Film	0.01 μF
C10	YWDEP473K	Film	0.047 μF
C11	ECQV1H105JZ	Film	1 μF 50V
C13	YWDEP103K-F	Film	0.01 μF
C16	YWDTN2G102K	Film	1000 pF
C17-19	ECEA1EFS471	Electrolytic	470 μF 25V
C20	EC0S2DG331WL	Electrolytic	330 μF
C21	ECEA1VGE470	Electrolytic	47 μF 35V
C22	ECQV1H104JZ	Film	0.1 μF
T1	YWSVBT12SD	Transformer	
L1	LFEE221R8A5	Line Filter	
L2	HK10S1R037TV	Choke Coil	
F1	YWGHS3	Fuse	
E1	YWM110CW5PUL	5-pin Terminal	
E2	YWMC11-5P	Terminal Cover	
E3	YWSB2569A	Fuse Holder	
M42	YWMSVBALCA02	Upper Caser	
M43	YWMSVBALCA01	Bottom Case	

REF.NO.	PART NO.	DESCRIPTION
M44	YWZSVBIS01	Insulator Cover
M45	YWTC45ACPT03	Rubber
M46	YWMVTBFELA1	Mounting Angle
M47	YWZNPSVB12SD	Decoration Label
M48	YWMSVCUBW1	Bar A
M49	YWMSVCUBW2	Bar B

ACCESSORY PARTS/PACKAGING PARTS

REF.NO.	PART NO.	DESCRIPTION
CN103	YFCNR-1204J	Socket
CN104	YFCNR-1204P	Socket
E101	YWPS550C2836	Cable
M51	YWV8QA3249AN	Operating Instructions
M52	XZB26X40C05	Polyethylene Bag
M53	XZB35X50C05	Polyethylene Bag
M55	YWV9CA2204AN	Packaging Assy
M56	YWV8FA0140A4	Packaging Label
M57	YWV8FA0203A4	Packaging Label